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A DISCUSSION OF SOME PROBLEMS

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The historical epoch in preventive medicine, so ably begun by a chemist, the revered Louis Pasteur, was given great impetus by Robert Koch, a bacteriologist. Bacteriology has, in turn, revolutionized our isolation and quarantine procedures. Theobald Smith focused attention on the importance of transmission of disease by insects. Biggs modernized public health practice in these United States.

It was not many years ago that the conscientious health officer first offered to quarantine the cases of communicable diseases that busy practitioners happened to report. When the quarantine terminated—the time being usually set by convenience or by social standing—the premises were diligently fumigated. But quarantine and terminal fumigation are both relatively unimportant features today in the control of the common communicable diseases.

The appalling conditions of housing, hazards and fatigue under which the laborers of America lived and worked, the often contaminated water supply and improper sewage disposal, the consumption of unpasteurized milk from untested herds, the accepted presence of insect breeding areas and the high maternal and infant mortality rate were considered, but not too much done about it in many communities. The attack on the diseases of the heart, cancer, tuberculosis, the venereal disease group, and more recently rheumatic fever, requires continuous and intelligent leadership. For instance, in statistical and epidemiologic studies of rheumatic heart disease in children, there appears to be marked geographic difference in the incidence of the disease. From the available information, no definite conclusions can be drawn as to the disease being an infectious process though the streptococcal group is generally associated with the laboratory findings, or secondary to the poverty triad of insufficient and incomplete diets, poor housing and overcrowding. Perhaps all of these are concerned in some manner.

The magnitude of the rheumatic heart as a disease problem is recognized by health officials. The statistical estimates of the death rate in the group from five to 24 years is an indication of the amount of rheumatic heart disease. Sanatorium care for rheumatic heart disease is the most logical means of checking the severity of the infection and possible recurrence. It is also believed worth while to try the effect of change from cold, damp regions to warmer ones.

Specific home care for those discharged from sanatoriums is likewise deserving of special consideration. It is hoped that the medical and lay populations will come to recognize that sanatorium care is as important for rheumatic heart disease as it is for active tuberculosis.

DISEASE TRANSMISSION

An entirely new conception of public health arose when healthy carriers were recognized to exist, and when mild, atypical

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or missed cases could and did account for the spread of disease. It is now axiomatic that, if communicable diseases are to be controlled, we must investigate and determine their source and learn how they are disseminated. In many common infectious diseases we must deal primarily with persons, not things.

There are fanciful routes of infection suggested in some diseases, and some genuine modes of transmission, in a few diseases, do stretch the plausibilities. We must provisionally accept all possibilities, but never exclude the usual routes. These are, for all practical purposes, contact, milk, water, air, insects and animal reservoirs. Under animal reservoirs, it may be of interest to call attention to the disease undulant fever due to *Brucella abortus*. The most important consideration in this type of undulant fever is prophylaxis. Pasteurization of milk is the only logical present method and communities are extraordinarily reluctant to adopt this measure. It is not appreciated that a brucella infection, which has a remarkable tendency to a subclinical or latent course, will biologically express itself as a chronic disease with cycles of inactivity interspersed by relapses of varying degrees of intensity and frequency. Little is known concerning the persistence of viable brucella organisms in the infected human being. Every symptom in a person with a positive brucella skin test or an agglutination reaction is attributed to some peculiar characteristic of the brucella organisms. No answer has been given to the pertinent question: Why are women particularly prone to present a clinical picture of so-called "chronic brucellosis"? Moreover, the constitutional factors responsible for the protean manifestations have never been considered in an analysis of brucellosis. It would indeed be worth the effort. One can agree that isolation of the causative organism is the best proof of an existing infection, but not of existence of disease. These differences are still overlooked. It should be further emphasized that no diagnosis should be based on one single series of laboratory tests. Repeated examinations are essential.

The control of any disease depends, first, upon an early and accurate diagnosis; second, the ascertaining of the source, vehicle, or avenue of infection; and third, the prompt blocking of these. It depends also on public confidence in the health officer, for sometimes he must take extraordinary steps. There is no need, ordinarily, to prevent contact of persons; but drinking water and milk should be carefully analyzed before their use is permitted.

One of the difficulties now becomes manifest. Much laboratory work is inconclusive; specimens examined today and found acceptable may tomorrow be unsatisfactory. To make milk and water safe for human consumption means an untold number of inspections and ceaseless vigilance. It is possible to discover an infecting organism in the water and milk, but seldom indeed is it discovered or even attempted. Quite often, milk handlers and others are subjected to examinations of all types, particularly of specimens of the urine, the feces, and from the throat; the value of the examinations is problematical depending on the skill of the laboratory technician and the promptness of the investigation. Their formidable costs to the taxpayer outweigh the results.

Two of the modern weapons of public health work are bacteriology and epidemiology. Many of our older health officials regard them as synonymous. But lemology, or lemography, meaning the sum of human knowledge as to pestilence, was long known before bacteriology came into existence. The term "epidemiology" is more frequently used today. Epidemiology is a science with ramifications, including occurrences, incidence, distribution, infectivity, virulence or the causative microbe or viric factor, and seasonal or calendar periodicity, both present and past. Necessarily, the epidemiologist must have a broad training in bacteriology, immunology, pathology, medical zoology and parasitology, statistics, public

health administration, and sanitary engineering.

PUBLIC HEALTH BACTERIOLOGY

Bacteriology and its allies (serology, immunology, mycology, parasitology, and virology), cease to become separate entities and merge under the larger field-medicine.

It would be easy to indulge in histrionics to which the laboratory is so well adapted and which have so often been used. The creed of medicine has no place for histrionics and fantasy. We could presume, with pure speculation, that there must be a prize greater than the sulfa drugs and penicillin, just around the corner. There have been discoveries; there will be more. There are three general ways in which the relationship between physicians and the public health laboratories of tomorrow will be strengthened.

First, from these laboratories will come information which will give us a stronger hold on our knowledge of the etiology of infections. The background for much of our knowledge of diagnosis, treatment, and epidemiology hinges on an understanding of the etiology. This will help in many diseases, the etiology of which is not known or not understood. Differential diagnosis is increasingly difficult and dependent upon the laboratory. We are encouraged by glimpses of possible order to come in the confusing groups of diseases caused by viruses, rickettsiae, and yeasts and molds. In the practice of a physician and in the epidemiologic control of infection, knowledge of the etiology has been a significant key in development. We may lose our grip on bacteriologic technicalities but we cannot afford to lose it on etiology and on diagnosis.

Second, we are sure to have significant technical improvements in the laboratories. We are likely to overlook the influence of these technical improvements on medical practice and public health. For example, there are thousands of culture media, and the adding of one or two more seems inconsequential. Wilson and Blair devised a medium which permits typhoid bacilli to grow as black colonies while almost everything else is inhibited. Leifson devised a desoxycholate medium and the Difco Laboratories prepared a Salmonella-Shigella medium known as SS medium. While these developments occurred some dozens of other culture media were added to the thousands that exist, yet the addition of these three has improved the quality of laboratory work in connection with enteric infection so much that epidemiologic data are changing.

The third of these general shifts is a change in attitude. The increasing complexity of our existence is forcing specialization, whether or not we approve. The day has gone when the physician was also an expert technician. He must turn over the burden of technical knowledge of the laboratory to the technicians and end the pretense of expert knowledge. He will have all that he can manage to learn how to secure specimens, when to get them, what to do with them, and how to interpret the reports sent to him from the laboratory. He will do well to give to the laboratory the information that it needs to examine specimens intelligently. He must learn to accept the decisions of the laboratory predicated upon its knowledge of the technic with which it deals.

The relationships between the physician, the epidemiologist, and the laboratory will improve with better coordination of effort. It takes the physician as long to handle specimens and reports from a poor laboratory as from a good one; it takes the laboratory as long to handle a useless specimen as a legitimate one. This wasteful gap needs reduction. We need to guard against the satisfaction that comes from taking a specimen, when that specimen is meaningless.

Conversely, the relation of caries-resistant or caries-free persons to the consumption of soluble fluoride salt in domestic water supplies should prove a valuable source of study.

EPIDEMIOLOGY

Epidemiology must have a starting point, and this is usually statistical. The discerning health official must have a daily,

weekly, or monthly report, or all three; he must picture the location and number of cases with charts, and must know the previous movements of the patients. Highly desirable is the history of past incidence, in terms of an average for the non-epidemic period, the so-called "norm" or "expectancy". Such averages, when plotted in curves and corrected as to population estimates, may give reasonable endemic or constant seasonal information. With such information, and with care as to deviations (changes in population, and so on), the health official has a useful basis for collection purposes and for forecasting and broadcasting.

The discovery of the microbe, or ultravisible viric causes of disease and its various types; or of the parasite without its intermediate host, as in amebic dysentery; or with such a host, as in malaria; and the discovery of the manner of spread from person to person, or the role of insects and animals have added many new features to epidemiology. But the mode of spread of some diseases such as acute anterior poliomyelitis, is still obscure, or a matter of conjecture. Presumably, contact with the case or with the healthy carrier or missed case accounts for the spread of many diseases, yet elucidation of the problem of such dissemination is still being sought.

One of the difficulties not yet surmounted is the apparent power of a microbe or ultravisible virus to produce either serious or mild cases, or to produce few cases at some period or for several periods, or to cause epidemics or interepidemics (the so-called recurrences), or great pandemics.

It is attractive to assume, in this order of importance, that the virus of a disease like influenza is widely distributed, that individual and even racial susceptibility plays an important role, and that the virulence of pandemic strains subsides for years or becomes innocuous. Microbic or viric subsidence from a virulent to a non-virulent status has been suggested as a possible explanation of certain vagaries in the epidemiology of communicable diseases, particularly epidemic cerebrospinal fever; but at present this is not quite susceptible of proof. For instance, the facility and frequency of occurrence of influenza is very manifest, as is its dual epidemiologic role of pandemics and interepidemics. Possibly exaltations in virulence do occur. Two epidemiologic facts stand out prominently as to the pandemic of influenza of World War I, type unknown, that the so-called first wave was relatively slight and occurred in the spring; and that the second wave, occurring in the fall of the same year, was more explosive, more dangerous, more dispersive, more incapacitative, and more depressive of mind.

Many diseases, especially measles and scarlet fever, seem to occur in cycles or at periodic intervals which are assumed to be due to an accumulation of the crop of susceptibles. The recently advocated use of pooled plasma globulins for the prevention of measles in the armed forces could well be applied to the civilian population. Other diseases appear year after year with seasonal regularity. The reason for such periodicities is not yet known.

The law of etiologic specificity, or the association of particular diseases with specific micro-organisms has led to an expansion both of groups of recognized diseases and in groups of acknowledged causative agents. In the field of viruses expansion has been spectacular. More and more it becomes necessary to weave together the field of micro-organisms parasitic to man and animals in such a manner as to cover the entire field from a protein substance or "germ" which is non-living in the ordinary sense to the viruses, rickettsiae, bacteria and fungi and to the spirochetes, protozoan and metazoan parasites. This concept of specificity leads to study of the manner in which the human race and the animal kingdom have become subject to so wide a variety of illnesses caused by micro-organisms biologically so diverse.

To regard cancer as an epidemiologic problem may seem to be rather far-fetched, but the progress in treatment of cancer by newer methods of radiation brings to the forefront the advocacy and establishing by

departments of health of preventive clinics, where precancerous conditions may be detected; and likewise cancer in a curable stage. There is no doubt that the major reason for needless suffering and death from cancer is *delay* in treatment due mainly to fear and ignorance on the part of the patient.

There is no doubt that continued research in epidemiology, especially experimental, is needed in order to understand factors as yet unexplainable. In any event, the use of preventive measures against diphtheria and tetanus with toxoid, and against typhoid fever, yellow fever, cholera and smallpox by vaccination, has had a remarkable effect upon the reduction of these diseases. Preventive medicine and sanitation have not eliminated disease, but they have held pestilence in check. Because of the rapidity of travel today, especially by air, with its associated possibilities in the spread of diseases, epidemiology must more than ever take its place as a protective science.

The impact of war on public health practice of health departments has focused increased attention on diseases such as malaria, on bubonic plague, on housing, on tuberculosis, on venereal diseases, on mental hygiene, on the problem of nutrition, and on the inter-related preventive, medical and hospital care of those ill in a community. These are briefly discussed.

Malaria has always ranked high in the list of pestilences that are a blight to health, efficiency and morale. This disease may in a short period of years injure, and even wreck, a civilization fostered for years. Particularly does malaria affect the efficiency of labor, and the cost of this disease to industry, when prevalent, must be enormous. The pernicious "contract" work incidental to tropical areas is a result of industry protecting itself against the loss of time and money, despite the admitted fact that the tolerance for malaria in native populations may be considerable. For instance, the average parasitic rate in blood film surveys on workers on banana plantations may be as great as 25 to 30 per cent. The importance heretofore attached to enlarged spleen index rates in adults in the tropics and the Orient has been markedly discounted by many workers. If control of the breeding areas of the Anopheles mosquito, if of a type that is a potent vector, can be obtained, malaria would cease to be a disease of importance. It must be recalled, however, that only a few Anopheles mosquitoes, after emerging from the larval state, will play an important role. This role too is quite often dependent on the people, their environment and the clinical recognition of the disease with its proper treatment. This brings to the forefront the distinguishing of a new infection from ordinary relapses. This is generally a doubtful possibility except in infants. It is this point that makes the returning soldier and sailor from known infected regions of such importance to the health official of areas proved to have Anopheles breeding that are potent vectors.

It is an epidemiologic fact that many persons, previously exposed, carry the parasites for years. The elimination of relapses or the destruction of the parasites in the blood by chemo-therapeutic methods are still difficult problems. So long as military personnel will be returned uncured, or in a resting or subclinical stage, or when true relapses occur especially in treated persons, or be negative clinically, but microscopically proved positive parasitic carrier state exists, there must be adopted mosquito control measures in many communities in this country. These generally consist of drainage of unnecessary water storage; the treatment of all permanent water courses with oil, paris green dust mixtures, or the new insecticide, DDT, called dichlor-diphenyl-trichloroethane, and the use of top-feeding fish; the destruction of mosquitoes in human habitations and prevention of access to humans by proper screening; the elimination of migration of mosquitoes by various types of transportation; the proportional degree to which the different species of Anopheles are in nature vectors of malaria, and finally blood indices of population

groups and their subsequent treatment of those persons found infected.

Let no health official forget that financial and offical cooperation is necessary for control and that there is yet much to be learned to assure eradication of malaria. Moreover, malaria control will continue to play a major role in the war efforts of this and other nations.

Besides affecting malaria, climatic conditions seem to affect other diseases and their virulence. For instance, African sleeping sickness is apparently limited to certain regions suitable to the tsetse fly. Bubonic plague depends not only upon the flea of the infected rat or other rodent, but also quite definitely upon humidity.

PLAGUE

Plague erupted as a pandemic at the beginning of this century, and its previous history, and course during the past forty years suggest an analogy of a subterranean fire with periodic eruptions. From 1900 to 1910 outbreaks of varying intensity occurred in many parts of the world, and included California. Then came the explosion in Manchuria with 60,000 cases and deaths of pneumonic plague during 1910 and 1911. This was followed by a relative quiescence to recur in another devastating flare of 10,000 pneumonic cases in the same areas in Manchuria during 1920 and 1921. During these first twenty years of the century, both ports and countryside of the United States were invaded and the disease well established among rodents, apparently of all varieties. People of New Orleans were infected (1913-1914). Two sharp explosions of pneumonic plague occurred in California (1919, 1924, and 1925) among small numbers of peoples; and throughout this period similar or comparable manifestations of continuous activity of the infection were evident in Asia, Africa and South America.

The past twenty years have not been characterized by spectacular outbreaks in the United States. The appearance, however, of spasmodic cases from year to year and the detection of many epizootics among rats and field rodents in the western states afford a warning of the persistently glowing embers.

Today the world is disorganized and even though reports are limited or fragmentary, its frequent occurrence in man has been announced during the past several months in Egypt, Morocco, Dakar and other countries of Africa; in the Azores; in Bolivia, Peru and Ecuador; in India and Indo China; and close to our western shores in Hawaii. Current investigations among field rodents of western United States reveal the fact that it is smoldering among approximately twenty-five species of these animals including ground squirrels, prairie dogs, wood and field rats, and field mice in locations scattered throughout forty per cent of our continental territory and extending into the western borders of the plains states. Kindred species of these rodents are distributed through ranges which reach into the gulf states and well north into the mid-Atlantic group. The studies available do not permit of conclusions relative to the virulence and course of plague. It seems probable that rats are no less prevalent in the towns and cities than they were in past years, but salvage drives have definitely activated harborages. Large populations, however, of these potential plague carriers remain, and their presence is regarded by many people with the same complacency exhibited towards the family cat. Will the introduction of foreign strains of plague into the rodent population result in explosive eruptions of the disease? No man can tell. It is not the belief of those who are familiar with the conditions under which plague has developed its great devastations that our country is threatened with such. The stage, however, is set for the introduction or reintroduction of this disease into our densely populated areas and cities of the eastern half of the country, and for its possible extension into our own middle west.

What is to be the defense against this threat? There is no specific proved remedy for plague in the individual. The mortality varies from 15 to 50 per cent among cases which are classified as bubonic, the rate rises from 70 to 80 among those regarded as

septicemic, and almost all primary pneumonic cases are fatal. Reports indicate that some of the newer sulfonamide drug preparations may be of therapeutic value in bubonic cases, but little promise has been offered yet in the septicemic and pneumonic cases.

The control and eradication of bubonic plague from the afflicted community resolves itself into the control and destruction of the rodent carriers and their accompanying insects. This procedure has been and may again be most costly to the community. The control of extension of a pneumonic outbreak is that of a most rigid and complete segregation of the patient by trained attendants under strict technical isolation discipline. Previous to 1925, as is often the occurrence in these United States, the presence of plague in a community was announced by the occurrence of a human death from the disease, and the work of prevention began. The practice in some cities of consistently collecting and examining rodents and their insects has forewarned authorities of the presence of the infection, and an indication for its elimination.

The remedy is prevention and not too little of it or too late. This necessitates the establishment of an adequately organized and sustained program of examination and control of the rat population and their insects in a community. The institution of these measures in some localities may be regarded as urgent.

HOUSING

Environment plays a most important role. Natural resistance to disease must assert itself in many ways, and this may partly depend upon dietary factors, partly upon rest. Fatigue is considered a marked contributor to tuberculosis and cholera. Overcrowding, because of improper housing conditions, undoubtedly plays its part in the spread of respiratory and other infections and epidemic cerebrospinal fever.

For many years some departments of public health have condemned dwellings as unfit for human habitation, and places of business as insanitary and rodent-infested. In a sense, then, the efforts applied by departments of public health to the problems of housing and health have been negative and destructive. If a health department decides in its wisdom to destroy tenements that are unfit for human dwellings, then it is equally logical to demand decent dwellings for replacement. To the average health officers of American cities the problem quite often presents difficulties; and it is no novelty that some of these difficulties may result in political backfires.

Many of these dwellings are the forgotten houses, derelicts from the past, forsaken by their owners and left as decaying, rundown structures, where people of low incomes must live. They are the first cousins to the slum tenements; blights on the city—socially, economically, and from the standpoint of public health.

America has always had a consciousness toward slums, and there is seen today a dawning perception of our inherent right to decent conditions of living. Bad housing conditions must have cost this nation so much that posterity cannot begin to liquidate the debt.

The forgotten house, with its insanitary toilets, and sometimes its overflowing cesspools, its overcrowding, the lack of light and air, the coldness and the dampness, the lack of screening against mosquitoes and flies, and the fire and accident hazards, all lead to a higher mortality. Housing and health must receive increased thought and attention, particularly in cities, and some coherent plan should be adopted by the Federal government.

It is a well established fact that the quality of our housing has a direct relationship to the quality of our health and our morale. The statistics growing out of literally hundreds of surveys conducted over the past ten years indicate it is not just accident or coincidence that the large percentage of our disease, crime, and high governmental costs are concentrated in our slum and blighted areas. It has been said that one-third of the nation is ill-housed. I have no reason to quarrel with this generalization. I do know, however, that that part of

the nation known as the deep South is one-half ill housed.

This is the debit side of the ledger. Now let us look at the credit side. Beginning January 1, 1938, this nation started out on a program to end the slum, and all the evils attendant upon it. It was a modest beginning, and the funds made available represented an infinitesimal portion of the problem. However, between that time and Pearl Harbor, when all our housing resources were dedicated to the war effort, the South had built thirty-five per cent of all the houses constructed under this program, although it represented only about twenty-four per cent of the population of the country. In other words, when many other sections of the country were refusing to recognize the facts, and were fighting the efforts to clear slums and provide decent housing for the slum dwellers, the South was recognizing the facts, and courageously taking steps to meet them.

TUBERCULOSIS

Perhaps never before have we as a people been confronted with public health problems of such magnitude as face us today. Our efforts at solution may influence the destiny of this and other nations beyond the count of time.

In no single endeavor do we have such a clearly written script before us as in the direction of health measures for the control of tuberculosis. Today we are possessed of knowledge which if put into execution would remove from our midst many diseases and areas of potential danger.

One of our most insidious diseases is tuberculosis and to many this disease is considered the number one postwar disease. In spite of the effort of years, thousands of people in these United States die yearly of this disease. In the main, it takes its heaviest toll from those in the most productive years of life, namely the early adult years. The economic loss is enormous. Yet the principles of control and prevention are well known to health authorities. Tuberculosis is a communicable disease. It is not inherited, but is spoken of as a family disease because of the plentiful opportunities for contact within dwellings, especially where there is lack of education concerning the danger and much overcrowding in substandard homes in war industrial areas.

Tuberculosis is always present in any community. Transmission never arises *de novo*, but one case always comes from another. It is because of the slowness of its development that much of the drama is lost. If the immediate contact was followed by the immediate development of symptoms, respect for its communicability would be increased. In other words, the unexamined and sick nurse maid who cares for the baby may so infect that child that a break in health may not come for years. The initial contact then has long been forgotten, or perhaps never known.

The tubercle bacillus knows no economic, racial or caste boundaries. It is true that the poorest people in a community are the ones who suffer most. No individual, however, is safe if a laundress, cook or housemaid employed in that community is scattering tubercle bacilli in family or other groups.

The methods of control are in our hands. On paper it is an essentially simple procedure to find the clinically active cases, isolate and treat, not restoring them to community life until they have been rendered bacteria free and never discontinuing supervision of the individual or the family group because of the danger of reactivation.

What are these methods? In the hands of authorized experts the entire community should be investigated. This may and has been done by mass x-rays. Particularly should members of labor unions be given the opportunity to know about the state of their chest health. Especially should those members of the community who apply for relief be x-rayed. This chronic disease is frequently the cause of inability to hold a job.

For the child, a simple skin test, the tuberculin test, given at regular intervals throughout the childhood years will give definite information as to whether or not the child has taken the organisms into his

body. Because a child's contacts are necessarily few, the infecting person usually can be found without much difficulty when the test first becomes positive.

The negro of the southern states is one of the South's assets as a worker and citizen. Poor living conditions, however, have much to do with facilitating the spread of tuberculosis. With the negro it is as with other primitive races, they have not had the partial immunization received through generations of contact with the disease. Coupled with the degree of susceptibility is the lack of education as to prevention, substandard housing, and insufficient clinic and hospital facilities. In conserving negro health, the South will preserve its economy and the happiness and well being of some of its most useful citizens. It is gratifying to many thoughtful health officers of southern birth to see activity against preventable diseases in the negro race. Unfortunately, quibbling over the academic question of whether the negro has some racial tendency producing high mortality seems the rule. Tuberculosis is taking more than fair toll of this group. In 1942, the negro mortality rate was 117.4 per 100,000 while the white rate was 34.9. Improvement of living conditions and reduction of mortality from tuberculosis in the negro race should be realized by health departments.

An understanding of the magnitude of the general problem, better law making, and money made available through taxation are the elementary needs. An open case of tuberculosis in Texas who refuses hospitalization should not be allowed to come to Louisiana and continue infecting the community. This type of migration, especially in this industrial war era, has proved costly to communities. Likewise, the recalcitrant case should be put under control. The active cases can be found. With miniature films, thousands of x-rays can be taken daily. The x-ray film of every patient, whether physician's office, call or hospital, has been advocated. After the cases have been found the next step is isolation until they may safely return to community life, or permanent custodial care if they are found to be too advanced for recovery. The cost of such a program is only a fraction of what is now paid out in the care of the tuberculous. The earlier the case is found the less it costs the community in money and in mortality. In California we estimate that an early case costs on an average of $2,500, while an advanced case costs $5,000, just twice as much. One-third of the cases reported die in the year they are diagnosed.

With the war approaching its close we begin a new era in government in which as never before our country must assume leadership. Statistics of the spread of disease in the war-torn and occupied countries have not been available but already the news is broadcast that one person in every 200 in Italy has tuberculosis. When the plight of countries such as Poland, Greece, the Low Countries of Europe are considered it is realized that this disease will have assumed the proportions of a world-wide epidemic in which mass slaughter from disease will continue for generations unless known methods of control are applied early and amply supported by governments.

NUTRITION

With the possible exception of pellagra, clear cut clinically defined disease entities of dietary origin have not played a large part in mortality and morbidity statistics, so in the past the attention of public health officials and physicians interested in preventive medicine has not been focused on the role of nutrition in the public health program. It is now recognized, however, by many physicians, dentists, dietitians, nutritionists and nurses and others interested in the public welfare that malnutrition and borderline diseases are not uncommon in the low income groups and also among persons with sufficient incomes but with faulty food habits. Malnutrition has been spoken of as "the great disease of the American school child." Perhaps the working war mother has caused trouble heretofore not considered in the war effort of women.

That malnutrition in this and other countries is now recognized as a major health

problem, not only in children but also in adults, is emphasized by Sebrell. He states: "The prevention of malnutrition and the deficiency diseases is probably the greatest and most complex problem in public health that this country has ever had. The exact extent of physical disability, economic loss and disease directly or indirectly related to nutrition is unknown, and yet there is every indication that malnutrition is very widespread. Some physicians who do not see many cases of advanced deficiency disease feel that the importance of nutrition is being overemphasized. In every clinic in which close observations are made and the more refined methods of diagnosis are used, many unsuspected cases of malnutrition are recognized, and every study reveals the importance of mild degrees of deficiency in producing symptoms, the cause of which were hitherto unrecognized. Furthermore, it is significant that almost all practicing physicians are prescribing vitamin preparations for more and more of their patients." The recent current comment in the Journal of the American Medical Association that the citizens of this country spent 179 million dollars in 1943 for vitamins is illuminating indeed.

In terms of dietary adequacy, it is doubtful that the world has never had enough to eat. So-called over-production and apparent surpluses have in reality been failures to secure adequate distribution. Certainly the greater part of our population underwent food rationing with success even if it did bring alterations in food habits. That part of our population who will either not cooperate or who are unable to understand the fundamentals of nutrition are most likely to suffer, and with them the community and there on to their children. Food rationing in America began with many doubts but it appears to have been successful.

The influence of diet on physical and mental fitness is being evaluated today more than ever before. Diets may be quantitatively adequate but may have qualitative deficiencies. The method of preparation is important in determining the loss, if any, of possible nutritive value. Every effort should be made to provide nursing mothers and children with milk, vegetables and fruit in sufficient quantities. Vitamin fortification of foods often complicates the problem. Practical demonstrations to housewives and school children by trained nutritionists should be the rule rather than the exception. Nutritional hygiene is a new and complex subject.

VENEREAL DISEASE

Venereal disease control in wartime has the advantage of a free flow of funds. The Congress of the United States during the past three years has appropriated $12,500,000 towards venereal disease control, of which $10,276,200 are actually distributed to state and local health departments. The 48 states and their local health departments in 1944 appropriated $4,666,700 — from state and local funds toward venereal disease control, thus making a grand total for this fiscal year of $14,942,900 spent on venereal disease control. An alarming situation in this financial record, however, is shown by the fact that only 31 per cent of the total venereal disease control expenditure is appropriated by state and local health departments.

Prostitution is, perhaps, the main single factor in the dissemination of venereal diseases. In spite of all our efforts to control venereal diseases there is now occurring an increase in the prevalence of gonorrhea and syphilis in the civilian population of the United States. The amount of venereal disease is drastically lower than would have been experienced had prostitution not been adequately and actively repressed during the wartime period. The action taken in the repression of prostitution has been considered by many as a patriotic wartime duty to protect the armed forces and war workers without full public understanding of the importance of such a procedure to the local community health and welfare.

All cases of venereal disease in the armed forces have been carefully questioned by medical officers or their representatives, and the information regarding the civilian sources and contacts has been promptly

reported by the military to local civilian health departments. This program has resulted in the finding of a large number of civilians infected with venereal disease. The epidemiologic program has been successful and has contributed markedly to the reduction in the potential incidence of the diseases that would have been reached, had it not been for this epidemiologic service.

In addition to this, the United States Public Health Service, usually through state health departments, has, with the assistance of Lanham Act funds, provided so-called rapid treatment centers for certain women found to be infected with venereal diseases. The treatment of these women at these centers has been expedited and they have been generally returned to the community in a non-infectious state.

Much effort has been made in the last five years to shorten the treatment period of syphilis and gonorrhea. These attempts have resulted in the one-day treatment, the five-day treatment, the eight-day treatment, the ten-week treatment for syphilis, and the one-day and five-day treatments for gonorrhea. Unfortunately, the majority of these accelerated treatment plans have proved ineffective generally. As a result of these accelerated treatments, however, we have made definite progress in the treatment of venereal diseases. It is now felt certain that the so-called Eagle or ten weeks treatment for syphilis is relatively safe therapeutically,, and efficient in the treatment of syphilis.

It is felt that the so-called rapid treatment for gonorrhea with sulfa drugs is only effective in 50 per cent of the cases treated, and that the one-day penicillin gonorrhea treatment is effective in 70 per cent of the cases. Statistics are available indicating the fallacy of accepting the asymptomatic state of a patient with gonorrhea, who has been under sulfonamide therapy, as sufficient evidence that the patient has been cured. It has been demonstrated that a third of the patients are still infectious during this clinically asymptomatic state, and therefore laboratory observation perhaps for months is necessary to assure bacteriologically negative cultures. It is possible that a combination of arsenicals and penicillin in the treatment of syphilis may prove to be efficacious in the light of future experience and may ultimately reduce the treatment of syphilis to a matter of a few weeks rather than one of months, and also that a combination of the sulfonamides and penicillin treatment in gonorrhea may reduce the treatment of gonorrhea to a matter of days rather than a matter of weeks. In all these treatments, however, it is safe to postulate that a prolonged observational period should in the future be indicated, as it is now, to assure the patient and the community of his complete freedom from the disease.

In San Francisco, a new approach has been made from a socialistic point of view in the prevention of prostitution in that there has been established a psychiatric service for special types of cases. Many women have been found to be amenable to psychiatric redirection, and if such a program is continued in the postwar period, it will undoubtedly lead to a potential reduction in the future recruits to the field of prostitution. The war has led to an intensification of the venereal disease education program which is perhaps the most important single factor leading to the success of any venereal disease control program. Sex hygiene instruction urges service men not to expose themselves to infection, and to avail themselves of prophylaxis if they do nevertheless expose themselves. Experience in public health education in general has shown the importance of continuing educational programs of this type and repeating them at frequent intervals in order to achieve sustained success.

With the advent of World War I, Congress passed an act which established the United States Interdepartmental Social Hygiene Board and Division of Venereal Diseases in the United States Public Health Service. In addition to this they appropriated funds to aid the states in establishing adequate venereal disease control programs.

If this program had been continued, in

all certainty the incidence of venereal diseases at the present time would have been negligible in comparison to their present incidence. With the cessation of hostilities, however, Congress and many state governments in the interest of economy cut appropriations, and cities did likewise in the maintenance of venereal disease control programs. With money and personnel hopelessly curtailed, these auspicious beginnings became static. It required many years of work to build up more adequate local and state activities to interest the local communities in supporting local venereal disease control programs. It was not until 1937 and 1938 that sufficient public support had been achieved to make it possible for Congress again to appropriate venereal disease control funds on a nationwide basis to develop our present venereal disease control program.

What will be the effect of the postwar period on this appropriation? A great wave of economy may be expected in Federal expenditures. All war emergency expenditures will undoubtedly be slashed. The postwar period will present a need for greater financial expenditure in venereal disease control than was presented during the wartime period. The experience of World War I showed that following hostilities there was a letdown in the repression of prostitution. There was an increase in the prevalence of syphilis and gonorrhea occurring out of these conditions. Unsound financial and administrative restrictions resulted in eliminating trained personnel and otherwise handicapped essential public health, medical, social and educational activities in venereal disease control.

At present there is a wide degree of regimentation necessitated by the emergency. This will, to a large degree, be limited in the post-war period. Repression of prostitution was facilitated because many women who are professional prostitutes and who were forced out of business were able to secure good wages in the wide variety of employments. Many war industrial jobs will terminate with the cessation of hostilities thus throwing many people out of work, including former prostitutes, and those on the verge of prostitution. No longer finding themselves in a lucrative employment, they will be welcomed by exploiters and facilitators back into the prostitution racket. It is therefore important that the interested citizenry of the community must do everything possible to make sure that the public throughout the country is convinced of the importance and necessity of the repression of prostitution as a permanent policy.

The educational program which is now being conducted so splendidly by the armed forces must be continued when these men are in civilian walks of life. When these men contract venereal disease in civilian life they will need diagnostic and treatment service. These must be furnished in the civilian community.

No matter how excellent diagnostic and treatment methods may be, they do not greatly affect the prevalence and spread of venereal diseases unless they are generally available to everyone, and unless they are actively applied to the infected person. Moreover, the widening of the application of premarital and prenatal serologic tests must be fostered. Much has been said as to the high syphilis rate in Southern states among the negroes. If the mortality rates for syphilis in the United States for 1942 are correct, then the rate of 8.8 per 100,000 for white and 45.2 for negroes, is a definite and wide discrepancy. The serologic rate for syphilis in negro Selective Service Registrants was reported by the United States Public Health Service to vary in the various age, rural and urban groups. These results reached the astonishing high rate in 36-40 age group of 377.5 per 1,000 in the urban negro and 403 in the rural negro. If syphilis is a part of the problem of delinquency, then negro delinquency is as much a problem to the so-called dominant race, as it is a curse to the colored people. Persuading infected persons to seek diagnosis and treatment will require much more educational and epidemiologic service than is now provided by any civilian community.

Interest in age distribution of venereal

disease in San Francisco is directed to the under 18 group. In 1942, 1.6 per cent of the cases of syphilis were in this classification. In 1943 the percentage had increased to 3.1 per cent and with only nine months of 1944 reported, the trend appears definitely upward.

The percentage of cases of gonorrhea in the under 18 group is even higher than for syphilis but shows the same general trend —6.0 per cent in 1942, 10.2 per cent in 1943, and for the nine months of 1944, 7.8 per cent. In each year, the percentage of females under 18 is greater than for males.

The specter of juvenile delinquency to many social workers is not pleasant to contemplate.

MENTAL HYGIENE

Another epidemiologic area of prevention which is destined to become more and more a public health matter is that of mental hygiene. Mental maladjustments and minor disturbances are gradually coming to be regarded as important health matters rather than eccentricities or moral obliquities for which the culprit should be punished or ostracized. Educators, social workers and physicians have long recognized a considerable proportion of our population as incapable of, rather than unwilling to assume the minimum responsibilities that go to make up good citizenship. Censorship, neglect, and punishment have not resulted in improvement of behavior, and the victims of this method of treatment have become increasingly unfit and unhappy.

During the recent war years, a great amount of information has been accumulated as to the particular traits of men which make it impossible for them to fit into the routine of the various armed services, and with the publication of the figures concerned with the numbers which have been rejected by draft boards, or discharged from the services as neuropsychiatric cases, the general public is fast coming to a realization that this is no insignificant matter either for the armed forces or for the civilian population. The last world war produced many cases of "shell-shock" so-called, which were popularly regarded as a special form of war casualty. Even then, psychiatrists recognized these war breakdowns as cases of mental disorder, ranging from minor disabilities to actual psychoses, and knew them to be the old familiar disturbances long known in civilian practice. Further than that, it was clearly recognized that a large proportion of these disabilities could have been avoided if more care had been exercised in screening out those vulnerable personalities especially susceptible to the development of mental disorders under stress of any sort.

There is no little danger that this problem will be passed off as a military matter, for which the civilian community has no responsibility. Some psychiatrists in the armed forces have even gone so far as to say that discharge from the army merely meant releasing men who would fit successfully into civilian life. There could be no greater mistake. Many of those unfitted for Army life have already failed in civil life, and many more of the tragic failures in civil life bear striking resemblances to the military failures.

Experience is gradually beginning to make clear that the treatment of adult social derelicts does not accomplish much; but these social derelicts are too often the heads of large families, and health departments the world over are well acquainted with the conditions under which they live.

The time is not far distant when the absurdity of present day health measures will be recognized, not only by the doctors, nurses, and social workers who are already well aware of much of this, but by the great bulk of human beings who cast the votes and indirectly control the public purse strings. Giving incompetents more money for "busy work" does help a little but the essential problem remains the same. It is now common belief that children should not be blamed, but that the parents should be *penalized.* Nearly all of these problem parents have themselves been problem children. The records of our juvenile courts, of our clinics, and of our schools show clearly enough how self-perpetuating this cycle is. There is a tragic irony in the

statement so often made by these parents in defense of their children,—that Johnnie or Mamie are just the same as their parents were, and that they will outgrow it. All that the children do is to grow older, have their own children, and so keep the ball rolling. If we are ever to have even a partial solution of the present appalling situation with regard to mental illness, preventive work must begin in childhood and mental disability must be regarded as a health problem quite as important as is the control of epidemics. The gap between a difficult child and a neurotic or psychotic adult only seems wide, and unquestionably much adult mental illness will be prevented when the difficulties of children are ironed out.

Departments of public health have proceeded on the hypothesis that a diagnosis of feeble-mindedness once made should not necessarily mean an absolutely incurable condition. It is fully recognized, however, that deficiencies in brain tissue can never produce a normal mentality. Moreover, the cases regarded as due to inherited defects bring up another moot question of the prevention of the birth of additional children from the original parents. And, furthermore, humanity demands that, once born, a child so mentally handicapped must live, and must be adequately trained or controlled. To be effective, therefore, the application of modern methods of mental hygiene as a public health procedure must begin early in order that a distinct menace to society may be scientifically and humanely obviated.

MEDICAL CARE

Recent months, more than ever before, have seen the development of concentrated interest in and extensive discussion, especially in legislative halls, of the problem of medical care, particularly as to governmental participation in their solution.

American medicine today leads the world, scientifically and in all its humane aspects. Much of the discussion is built around public health and the lack of medical care. Public health, as such, is really not the duty of organized medicine. It is the duty of government, whether it be city, state or nation. Therefore, if there has been any neglect of public health in any locality, the blame should be placed where it belongs—on government.

Adequate medical care in all its ramifications (which would include clinics, dispensaries, hospitals, and the necessary laboratory tests and home visits) should be divided into three groups: (1) those who cannot pay because of a disproportion between income and their medical needs; (2) those who should pay but find themselves in great difficulty because of their own budget limitations and ineptness in planning for illness; and (3) the smaller group who can pay for anything at any time.

Experience with the first group is available in San Francisco. With the second group, there is no doubt that medical opinion has been divided, but that division is more apparent than real. The division is in two schools: (1) compulsory health insurance, which many feel very definitely that these United States should never adopt; (2) voluntary health insurance which a large portion of the medical profession thinks should be the American system, and whereby the patient may have, at a reasonable cost, choice of hospital and choice of physician. The dentist and the nurse, especially in home care visits, are seldom, if ever at all, mentioned in such a scheme, and yet the nurse in indispensable for the care of the ill, as is likewise the dentist in a great variety of diseases. Moreover, the seeming neglect of postgraduate training for the physician is an oft-repeated challenge not yet entirely answered by organized medicine or the medical colleges.

In San Francisco the limitations of government in medicine are thought consistent and there is no medical or public health neglect within the budget allowed. The institutions of the Department of Public Health include the San Francisco Hospital, the Laguna Honda Home, the Hassler Health Home and the Emergency Hospital and ambulance service. More closely allied to the institutional section administratively, but also very closely related to the

medical-dental-nursing section, are the chest diagnostic centers, the outpatient obstetrical service, the venereal disease diagnostic and treatment centers and the city physicians, treating persons in their homes.

If the program of public health should include hospitalization and home care of the indigent (classified as such because of their medical needs and limited earning capacity), which has not been the case heretofore in many localities, then again the matter is for government through health departments and not through organized medicine. There still would remain the care of the moderate income group. It is this group that becomes the *piece de resistance* for argumentative health insurance advocates.

It may be of interest to note that there has been a truly spectacular development of non-profit health plans during the past eleven years. Despite the development which has taken place there are many who believe, and many who contend, that these plans have reached their full development and cannot be expected to reach a large proportion of the people. It has been predicted, however, that with the support of the medical and allied professions, and with the support of hospital trustees and executives, the people of this country can be relieved of the financial burden of curative health care within a reasonably few years through medical plans and the companion hospital plans.

California has the honor of being a pioneer in the health service plan movement. The first free choice hospital service plan was organized in Sacramento in 1932, and the first state-wide medical plan was organized and incorporated under the California Non-profit Corporation Law on February 2, 1939. Much of the credit for the present nation-wide development of health plans must be given to California. The administrative members comprise physicians and laymen who are leaders in other fields, and management is vested in a Board of Trustees who are elected by the administrative members.

California Physicians' Service differs from other prepayment medical care plans in two fundamental respects. First, the professional membership is open to any doctor of medicine licensed to practice his profession in the state. He does not have to be a member of the County or State Medical Society. The professional member has agreed, in writing, that all compensation for professional services that may be rendered by him to any beneficiary member shall be limited to the funds collected by the California Physicians' Service monthly from beneficiary members. This limitation is called the "Unit System," and it has the effect of limiting liability on the part of California Physicians' Service for the cost of medical care to the funds collected each month. In other words, California Physicians' Service cannot have a deficit, nor can it have a surplus.

The unit system operates as follows: Dues collected in each month from beneficiary members are segregated into two funds, an administration fund and a professional members' fund. The administration fund is used to defray operating costs. At the end of each month, the professional members' fund for such month is distributed to those professional members who have rendered medical or surgical services during the month. This distribution is accomplished by assigning to each type of professional service an agreed-upon unit value. For example, an office call is one unit, an appendectomy is fifty units. At the end of each month, all units of service rendered in the month are added, and the sum of dollars in the professional members' fund is divided by the total number of such units of service. The figure resulting is the dollar value of each unit of service for that month. The professional members' fund is then disbursed to the professional members on the basis of the number of units of service rendered by each during the month. Hence, each doctor receives a sum equal to the number of units of service

rendered by each during the month multiplied by the dollars of unit value.

It was early seen that the amount of dues paid (namely $2.50 per month—$1.70 for medical and 80 cents for hospitalization) for benefits that ranged from periodic health examinations and refractions to all types of major surgery, was going to prove inadequate. California Physicians' Service has designed a fee schedule which represents fees that the medical profession in California would normally charge through channels of private practice to families earning less than $3,000 per year. As the full coverage program progressed, it was unreasonable to expect the medical profession to continue indefinitely under these conditions.

It can be safely said today that the medical profession of California has actively participated in the development of prepayment medical and hospital care and has made a sound investment in its California Physicians' Service, the potential of which, both from the social and economic points of view, represents unknown resources which only time can reveal. The California Physicians' Service should receive the support of labor organizations and Federal Housing Agencies involved in housing workers in areas of concentration of population due to war industries. The beneficiary members are those persons, who, upon payment of monthly dues, are entitled to secure when needed, medical and surgical and related services for any professional member. Hospitalization, drugs and appliances are in some instances supplied to beneficiary members.

Furthermore, it may be of interest to point out that on September 30, 1938 the Health Service System of San Francisco was adopted by the Board of Supervisors for city employees of the City and County of San Francisco. The initial charges per month for employed members averaged $2.50 and for minor dependents $1.50. However, as the system progressed, it was necessary to adjust the fees and at the present time the charges for employed members are $2.80 a month and for minor dependents $1.80. Adjustments have been made in the charges of retired members and dependents over the age of 62. There are approximately 15,000 members in the Health Service System at the present time.

This system is also operated on a unit plan. Every service rendered is weighed in units and each service or operation given a certain weight. Administrative and agency (hospital, laboratory, x-ray, ambulance) services are paid first and have always received a full 100 per cent despite the fact that hospitals and laboratories have all increased their rates. The remaining money is distributed on a unit basis to doctors, whose services comprise by far the greatest portion of all medical costs.

In agreeing to participate in the Health Service System, the doctors recognized the experimental nature of the plan. They realized that it was impossible to anticipate exact medical needs. For that reason, and to protect the System to some extent against the effect of an epidemic or catastrophe, the unit method of payment for professional services was adopted. This permits an inadequacy of funds during any period to reduce the amount paid for individual services to a point where all services rendered will be covered by the monies available. During the formative period of the Health Service System, at various times doctors did not receive a full 100 per cent for services rendered. However, the value of the unit has remained at $1.00 since it was attained in December, 1942, and present conditions, in the light of past experience, would indicate that the System can continue to pay for professional services in full at the present rates of contribution, if the extent of coverage remains substantially the same. The ability of the System to pay in full for services rendered to members has removed one of the greatest difficulties under which the System functioned during its earlier years.

CHILD HEALTH

Child Health and Welfare agencies must have as objectives more than the prevention and care of disease. Social and phys-

ical environment for the full development of body and mind and opportunity for wholesome emotional expression must be provided.

The child's own parents are provided by nature to assure him such care, understanding, guidance, and protection as will further his full development. The parents in turn depend on the social and health conditions of the society in which they live. We know, however, that often the child has lost his parents, or for one reason or another, they are inadequate to care for him; hence the natural family care and protection are gone.

Also it is too often true that community health programs are completely lacking or of such low level that health and well-being of children suffer.

It is for these reasons, among others, that governmental responsibility for health of the child and mother is increasing. Just glance statistically and comparatively;—in 1942 the infant mortality rate in the United States was white 37.3 per 1000 live births, while the negro rate was 64.2; the maternal mortality in white 2.2 and negro 5.5. We can hope and expect to see in the next few years on national levels, state or local, developments such as greater use by government of trained health workers—doctors, nurses, dentists, psychologists—for protecting and improving child and mother health, also training teachers for health education in the class room.

Professional workers in the field of public health in the democratic post-war world must ever bear in mind the importance of public support for health programs. Such support is derived from understaanding and thus health education becomes a two edged sword—it makes the individual put hygiene into personal practice and it insures public support of public health programs. The best time for teaching health principles is during the formative years—to the school child. A well conceived and executed health education program in the grade schools is of primary importance.

The field of Child Health is wide—too wide to cover here even in outline. There are factors very important to the health and development of children and these should be mentioned briefly: (1) the economic welfare of the people as a whole; (2) infant welfare facilities, such as well baby conferences, immunizations and so on; and (3) the place of women in industry. Though obvious, it is well again to emphasize the favorable effects of good standards of living on child health, morbidity, and mortality. The problem of mothers in industry has been sharply called to our attention during this present war. If, post-war, women will continue to work outside their homes, substitutes for home care on a community basis must be provided for children. It is not a question of "should" women work outside the home—it is a far more complex social problem than that. From the standpoint of child health in a post-war world, this question becomes important.

In the last year of his life, after a truly international career, Dr. William Osler declared that the future of medical practice lay in the preservation of health—the prevention of disease. Public health administration, however, is a merciless master. It has to get things done; it gives no heed to abstract thinking.

SUMMARY

Good health, especially in times of war, is a prerequisite for work; for happiness; the absolute safeguard of the intellect; preserves morality; and is the greatest asset of family, community and country.

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SOME PROBLEMS OF PEDIATRIC GYNECOLOGY*

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NEW ORLEANS

This subject has long been neglected by both gynecologists and pediatricians. It has only come to the fore in the past decade and more particularly in the past few

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years. Two excellent symposia on problems of adolescence have been held recently by the American Academy of Pediatrics and have focused attention on this neglected field. That one does not think concurrently of pediatrics and gynecology is quite understandable, especially as applied to the infant and child, but it is difficult to understand and appreciate the equally neglected adolescent girl, who is rightfully the concern primarily of the pediatrician who has known her and followed her progress for years.

In general, except for injuries and diseases incident to childbearing or senility, the female under the pediatrician's supervision is heir to practically every gynecologic disorder which may be found in the adult. It is important, therefore, that thorough inspection of the genital tract be a routine portion of a general examination of girls, and the sacred taboo of "navel to knee" be discarded. It is true that examination does not often yield pathologic findings, but that is no excuse for neglecting an important part of the examination; it is astounding how frequently minor pathologic conditions such as phimosis, smegma, and adherent labia are discovered. All pediatricians are impressed with the necessity of examining the genitalia of the male child; it is hoped that this same consciousness will follow for the female. The charge that such examinations are painful and shocking need not hold, if they are properly done; it is important that both mothers and children be taught early to be less selfconscious and less resitant to proper examination. A woman of thirty years with an improper background can also be severely shocked by pelvic examination, but we do not hesitate to complete an investigation so important to her health and well-being.

The technic of examination, gentleness and cooperation of parent and patient will of course play a large part in success of the procedure. The examination should include, as a minimum:

1. Careful inspection of the external genitalia. Note any gross external anomalies of genitalia, anus, and adjacent areas; evidence of trauma or injury, skin lesions, accumulations of smegma which may be causing discharge and local irritation; evidences of hermaphrodism or pseudohermaphrodism; bulging or imperforate hymen.

2. Gentle but thorough recto-abdominal examination. Presence of hematocolpos or hematometrium; displacements and motility of the uterus; pelvic tumors (uterine, tubal, ovarian, extragenital).

For vaginal smears, often a necessary part of the examination, one should use a tightly wound cotton applicator. It should be gently introduced about one-third of intended insertion distance; if then released, it will assume a different angle, and with gentle pressure will glide easily up to the cervix. Smears made for gonococcus should always be vaginal and not merely vulval.

SOME ANATOMIC PECULIARITIES OF THE GENITAL TRACT OF THE YOUNG FEMALE

It is important to review some details of anatomic and physiologic peculiarities of an immature genital system, since these differ so much from the adult and account for tremendous differences in response to infection. These differences are not generally appreciated and are worthy of consideration. The immature vulva is situated more anteriorly; the protection afforded by the padding of the adult labia and mons is lacking; the vaginal orifice is much less recessed, lacking the protection of pubic hair; the anal and vaginal apertures are more closely approximated. These factors, plus marked activity, careless habits, and relative uncleanliness contribute to increased incidence of infections in this area. Likewise, the anatomy of Bartholin's gland differs from the adult, a simple structure with a poorly developed glandular epithelium, and are rarely involved in vulvovaginal infections. The immature urethra has stratified squamous epithelium in its anterior two-thirds and transitional epithelium in its posterior third. Scattered throughout its length are mucous glands which may be comparable to Littré glands of the male. These glands are usually rudi-

mentary, and urethritis is rarely a primary infection, though it may occur secondary to vaginitis. The ducts of Skene's glands open into the urethra near its meatus and rarely become infected.

The vagina of the infant has an alkaline pH, ranging between 7 and 7.5. Its epithelium is quite thin, containing about 6-12 cell-layers. This thin, uncornified epithelium serves as an excellent medium for gonorrheal infection and contrasts with the squamous epithelium of the cervix, which is immune to gonorrheal infection in the infant. Extension of this squamous epithelium into the endocervix to some extent, and the rudimentary character of the glandular structure of the endocervix also contribute to its immunity from gonorrheal infection. This is the exact reverse of the adult situation, where the vaginal mucosa is cornified, 28-30 cell-layers thick, has an acid pH (4.5), and is immune to Neisserian infection, while the cervix and endocervix are common loci. The pH of the vagina is important in relation to infection; gonococci thrive in slightly alkaline media, but will rarely persist where the pH is acid. These considerations form the basis for use of estrogen therapy in infantile gonorrheal vulvovaginitis. All vaginitis is dependent upon these factors of type of vaginal epithelium, vaginal pH, and gylcogen content of its cells. Use of a chemical paper (nitrazine or litmus) to note the vaginal pH should be routine and a valuable portion of the pelvic examination.

The uterus is small; the cervix has a squamous epithelium, and the endocervix has few glandular elements; the uterine and tubal canals are extremely narrow. These factors are important in an appreciation of limitations in spread of infections upward, and helps to account for rarity of pelvic inflammatory disease in young girls. The small ovary, the fact that ovulation does not occur, to produce a ruptured area filled with blood (corpus hemorrhagicum) and form a fine culture medium for organisms, similarly helps to explain the relative immunity of the ovary.

With these considerations in mind, let us consider some of the problems of pediatric gynecology from without inward, ascending the genital tract.

VULVAL DISEASES

The pediatrician undoubtedly sees a large number of vulval lesions. Very often the cause is easily discernible and only rarely is diagnosis difficult; trauma and injury are common. Edema, hematoma, or hemorrhage often seen following trauma, may appear alarming but usually yield readily to compression, and hot or cold applications. Only occasionally is surgical intervention necessary to suture a bleeding area or to incise and drain a secondarily infected hematoma. The vulvovaginal region is extremely vascular, which contributes to the seemingly massive hemorrhages from relatively minor injuries as well as to resistance to infection and rapidity of healing of these parts. The medico-legal aspects of trauma incident to rape or attempted rape are well known. The vulva may present all types of skin lesions, both local and general; the role of irritating garments, medications, powders, and allergens must be considered. Ulcerative lesions of tuberculosis, syphilis, Ducrey infections, and granuloma inguinale are fortunately rare. Carcinoma in this region is extremely unusual at this age. The diagnosis usually results from maintaining an open mind, an observant attitude, and doing a smear or biopsy on suspicion.

THE VAGINA

The vagina is a frequent site of difficulties. Introduction of foreign bodies, leading to chronic vaginitis with foul discharge, is not uncommon. Frequent errors in diagnosis provoked by foreign bodies occur and are largely caused by lack of suspicion or inadequate examination. Any or all vaginal discharges should be suspected. Of course, many mothers make a great "to-do" over an occasional clear mucous discharge, which may or may not be noted on examination. In this case, simple hygienic measures should be tried before extensive examination or unwarranted therapy is employed. Clear mucous discharges are not infrequently associated with hypothyroid-

ism and may yield readily to thyroid therapy. The patient with a purulent or bloody discharge, however, merits careful investigation. Monilia and trichomonas infections are rarely seen; the majority of vaginitis cases in children are caused by foreign bodies, non-specific infection (streptococcus, colon bacillus, staphylococcus, pneumococcus, occasionally diphtheria) and gonorrheal infections. Therapy for foreign bodies is obvious; removal of the foreign body and use of measures to clear up secondary infections. Non-specific infections respond well to hygiene, topical applications of mild silver solution, or sulfonamides.

Therapy of gonorrheal vulvovaginits is still widely debated. Fortunately, topical medication in the form of silver irrigations and applications is largely passé. The quarrel is between those who lean toward use of sulfonamides or penicillin,* and those who prefer estrogens. Excellent results, up to 95 per cent cures, have been reported by capable investigators using either method. In general, sulfathiazole seems to be the sulfonamide of choice. Oral use of stilbestrol also yields excellent results and has an advantage over natural estrogens in that it may be administered orally rather than by hypodermic injection or vaginal suppository. The drug is cheap, effective, and can be given in milk or orange juice without the child's knowledge. Occasionally side effects to estrogenic therapy occur but are rarely serious. Development of the breasts, and other secondary sexual characteristics, and withdrawal bleeding have been observed. All of these are transitory. A far more serious consideration is whether or not estrogenic therapy significantly deranges glandular physiology. I do not know. My opinion is to the contrary. Regardless of the therapy employed, I would like to emphasize that diagnosis should be made only after proper smears and cultures have been examined. With improved methods now available, this is a relatively simple procedure. Equal caution should be taken in pronouncing a "cure." This should not be claimed until smears and cultures are repeatedly negative after discontinuance of therapy. Authorities differ on how long a period should elapse before repeated negative cultures mean "cure." If after therapy cultures taken at weekly intervals for a month, then at monthly intervals for three months, remain negative, we feel that the patient is cured.

*Some excellent results have been reported with penicillin, cures being effected with the use of 15,000 Oxford units every three hours until 120,000 units are given. Not a large enough series of cases has been followed yet to report more fully on this method.

UTERUS

The cervix is rarely a source of difficulties in the immature girl. Downgrowths of endocervical epithelium onto the external cervix are very often seen. These ectropions usually disappear spontaneously within the first year of life. Where they are persistent and provoke a discharge, they may be effectively treated with topical (endoscopic) application of 5 per cent silver nitrate solution. Rare instances of carcinoma of the cervix have been reported. Stenosis of the cervix associated with hematometrium or dysmenorrhea must occasionally be considered, and patency of the cervix should be determined for such indications.

The uterus, except for rare benign or malignant tumors, is seldom a source of difficulty in the young. In the adolescent we are concerned with the uterus in relation to menstrual irregularities and dysmenorrhea. The latter may occasionally be associated with acute flexion of the uterus.

THE ADNEXAE

The tubes, probably because of their narrow lumina and the protective mechanisms in the lower genital tract, are rarely involved; occasional instances of hematosalpinx and pyosalpinx may be associated with a stricture of the cervix and retained menses. Tuberculous salpingitis is usually associated with pulmonary or pelvic tuberculosis. After the menarche, the tubes may be afflicted with any disease found in the ma-

ture female and of course provoke the same symptomatology.

The ovaries, prior to ovulation, are rarely the site of infection. The unbroken peritoneal covering offers some immunity. They usually concern us in the child only as the site for benign or malignant tumors. The occasional granulosa cell tumor feminization is often dramatic and has been adequately emphasized.

PELVIC PERITONITIS

The pathogenic bacteria are usually pneumococcus, gonococcus colon bacillus, streptococcus, staphylococcus, and occasionally tuberculous. Pelvic peritonitis is infrequent in the youthful female and is often difficult to diagnose. It is apt to be confused with or secondary to some other acute abdominal condition, such as acute appendicitis, ruptured appendix, Meckel's diverticulitis, mesenteric lymphadenitis, iliac adenitis. The history is of great value. We see occasional cases of pneumococcal peritonitis. A history of recent pneumonia, preceding abdominal complaints and vulvovaginal infection, frequently aids in diagnosis. Routine laboratory studies add little. There is usually an elevated white count and variable slight changes in sedimentation rate. A careful history, physical examination, and thoughtful differential diagnosis is most important. In the young, infection has a tendency to localize with abscess formation rather than to become generalized. Intelligent use of blood, plasma, fluid, sulfonamides, and penicillin has improved the previously serious prognosis for pelvic peritonitis.

MENSTRUAL DISORDERS

The age at which the menarche appears varies widely. In the northern United States it is about fourteen years (twelve to fifteen), and here in the South it usually occurs a little later, contrary to prevailing opinions. While the onset of menses before the twelfth year is usually considered "precocious," it would seem more sensible to use the tenth year for such designation. Similarly, menarche after fifteen is usually considered evidence of delayed development and failure of the menarche to occur by the seventeenth year is considered an adequate basis for diagnosis of primary amenorrhea. One cannot be too arbitrary about these ages. A family history of similar variations in menarche is often very reassuring to all concerned.

Although precocious puberty has been reported in infants and toddlers, most of these cases are noted in middle childhood, around the seventh year. While neoplasm or hyperplasia of ovarian, pituitary, pineal, or adrenal glands must be carefully considered and studied, it can be definitely stated that most of these cases are entirely functional with no such lesion demonstrable. The younger the child, the more seriously must one consider the probability of malignant disease. In the study of such cases, examination of vaginal smears is most helpful and practical. Urinary hormone assays are not readily available and must be interpreted with caution; enough factual data have not been accumulated to make them entirely trustworthy. Other evidences of accelerated development should be sought for; "symmetrical precocity" is most apt to be on a benign, functional basis. Uterine bleeding in a child is almost never caused by adrenal hyperplasia or tumor. Very occasionally, careful study will justify exploratory laparotomy, particularly for granulosa cell tumor of the ovary. Of greater importance for these cases of unusual precocity is need for sex education, protection, and careful psychologic adjustment.

Frequent and difficult problems arise in management of primary or secondary amenorrhea, oligomenorrhea, or infrequent menstruation. When these occur because of gonadal hypofunction, there should of course be other evidences of delayed development of secondary sex characteristics. While thyroid extract is frequently useful in such cases, it is far too often used indiscriminately for adolescents; one should always justify this type of therapy by well known criteria. Endometrial biopsy, hormone assay, and vaginal smear may furnish valuable diagnostic information; of these three, the latter is simplest, most practical,

and quite easy to interpret with a little practice. By vaginal smear, one should differentiate the following:

1. Atrophic appearance of smear, indicating absence of estrogenic stimulation. This is noted in many cases of true primary amenorrhea and also in some secondary cases.

2. Subnormal estrogenic response and acyclic features, frequently noted with secondary amenorrhea.

3. Irregular cyclic changes associated with irregular ovulation, delayed puberty, secondary amenorrhea.

Patients having poorly developed sex characteristics and atrophic vaginal smears have a poor prognosis. Those who are relatively well developed and exhibit the second or third type of smear have a fairly good prognosis. Those with the third type and normal development seldom require treatment, and then the use of thyroid gives the best results.

It is often difficult to manage these cases. While increased gonadotropic or androgenic excretion with virilistic tendencies may indicate organic pathology, these are usually lacking. Here, too, therapy with thyroid extract is often indiscriminately used; it should be reserved for those cases which present objective evidences of hypothyroidism. Constitutional causes, such as fatigue, poor diet, secondary anemia or chronic disease are frequently overlooked. All too commonly pregnancy is found responsible for amenorrhea in young girls.

Estrogen therapy is helpful in some patients who have infantile internal genitalia and delayed sexual development. Justification for this is debated because of associated depressant effects on ovarian function; certainly estrogens should never be used over a period of longer than three or four months without a rest period of about the same duration. Estrogen therapy may occasionally improve the emotional status of the patient by accelerating development of secondary sexual characteristics and uterine bleeding but offers little else. The uterine bleeding is an anovular type from a proliferative endometrium, and its significance should be stressed to the parent and patient. Perhaps more physiologic is use of cyclic sterol therapy with estrogens during the first part of the cycle, followed in the second part with progesterone. This also has depressant effect on ovarian function and also requires adequate rest periods. In spite of glowing reports concerning the ovarian stimulating effect of gonadotropins, we have seen only poor results. Cyclic gonadotropins, are still in an experimental stage clinically. General symptomatic measures—exercise, rest, and proper diet—together with occasional use of thyroid extract, and judicious estrogenic, or cyclic sterol therapy remain most useful and practical.

MENOMETRORRHAGIA

Acyclic or functional uterine bleeding may be serious and quite alarming. Immediate control is best secured with complete rest, sedation, supportive measures as necessary for excessive blood loss, oxytocics and vaginal packs. Excellent results have been observed with large doses of estrogens given intramuscularly or into the uterine cervix. We have used stilbestrol in doses of from 5 to 100 milligrams intramuscularly in the buttock every four hours. The same drug can be given orally in doses of 5 milligrams every three hours until bleeding stops. I do not like to use male sex hormone which is contraphysiologic, but it has been used in doses of 25 milligrams intramuscularly at four hour intervals. A cumulative dosage of 600 milligrams should not be exceeded, and patient or parent should be warned to expect masculinizing features, particularly hirsutism. Simple diagnostic curettage is of course the time-honored, frequently effective procedure. X-ray or radium is indiscriminately employed in these young girls altogether too often and is mentioned here only to be condemned.

After control of the bleeding episode and correction of contributory factors in diet, environment, or emotional disturbances, we have used thyroid, usually with cyclic sterol therapy, as follows: 0.5 mg.

stilbestrol daily for 21 days, together with thyroid extract as specifically indicated. On the fourteenth day a daily dose of 5 milligrams of corpus luteum is added, and continued for the next 14 days. In this way there is an "overlap" of one week during which both estrogen and progesterone are given. A.P.L. substance (chorionic gonadotropin) has been successful occasionally when used in the last half of the cycle, or for a day or two before and two days after the onset of the menses. With the use of 5 to 25 mg. male hormone administered orally two or three times a week throughout, the cycle has been reported to give good results. I have not used it for the reasons previously mentioned.

DYSMENORRHEA

Frequency of functional, environmental, or psychic basis for this most distressing symptom is well known. Patients complaining of dysmenorrhea certainly deserve a most careful investigation and early correction of all possible contributory factors: physical, physiologic, environmental, dietary and psychogenic. Stenosis of the cervix is often overlooked as a cause, and sometimes other pelvic abnormalities can be discovered. In the light of our present knowledge, however, most cases of dysmenorrhea in young subjects must still be classified as "primary" or "essential." In symptomatic management, antispasmodics, sedatives, and psychotherapy all have their place. Thyroid extract is often valuable but is certainly overworked for this, as it is for some of the conditions previously discussed. Various endocrine preparations used in treating cases of dysmenorrhea find little support in conscientious clinical observations. Knowing that dysmenorrhea is present usually only when ovulation has occurred, cyclic sterol therapy to produce an anovulatory (painless) period may occasionally be justified. Even temporary relief from this terrifying pain may do a great deal to improve the physical, mental, and emotional status of the patient; we are often surprised to find that such a procedure, designed for temporary relief, produces gratifying permanent improvement. Again it should be emphasized that such cyclic therapy should not be used continuously for more than about four months. Oral corpus luteum, given for the last two weeks of the period, is frequently valuable. Further considerations in gynecologic management of dysmenorrhea are beyond the present discussion.

SUMMARY

It is hoped that this brief review, which has only scratched the surface of a fascinating and fertile field for productive investigation, will stimulate closer cooperation of all concerned with the welfare of children and adolescents.

GALL STONE ILEUS

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The report of a single incidence of gall stone ileus is seemingly not justified in view of the adequate coverage of the subject in previous publications. However, because of more frequent early operation in acute cholecystitis, this entity is one disease rapidly becoming a rarity. In 1925 Moore[1] gave an estimate of four hundred reported cases; in the intervening interval hundreds of additional case studies have been published. Three relatively recent reviews of the subject, by Balch[2] encompassing ten instances, by Wakefield[3] with ten Mayo cases, and by Hinchey[4] with six cases, thoroughly evaluate the entity. The virtues of this case report are embodied in its adherence to the classical clinical picture, the roentgen preoperative diagnosis and the completeness of the study.

CASE REPORT

Mrs. M. T., a 53 year old Yugoslavian, was admitted to Touro Infirmary on October 23, 1943, with acute abdominal manifestations of ten days' duration. There was a history of long-standing biliary tract disease without roentgen evaluation, a fairly definite bout of acute cholecystitis four months previous which subsided spontaneously. Six

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days before admission the patient had a bout diagnosed acute cholecystitis by her local physician, operation had been refused: fever, chills, and right upper abdominal rigidity had persisted. Twenty-four hours after admission, the upper abdominal symptoms suddenly subsided and within eight hours the patient developed localized pain in the subumbilical region with early evidence of high obstruction. Within twelve hours emesis became fecal; an upright film of the abdomen was diagnosed "gall stone ileus" by Dr. M. Teitlebaum.

DISCUSSION

Briefly surveying the literature one finds this entity more common in females by a ratio of 5:1 with an average age occurrence of 66 years.[2, 5] The history frequently exhibits chronic biliary symptoms upon which is superimposed acute cholecystitis after which, during a very variable period from hours to years, migratory obstructive manifestations (partial, intermittent or complete) may develop.

Lowman and Wissing[6] report the preoperative roentgen diagnosis to have been recorded in only eleven instances. The most typical findings would be those illustrated in our report; that is, (1) the biliary radicles outlined by the presence of gas within the ducts; (2) evidence of small bowel obstruction; (3) a demonstrable calculus in the lower ileum. Borman and Rigler[5] suggested the roentgen visualization of gas filled bile radicles as being diagnostic.

The mention in the literature of barium delineation of the fistula as diagnostic is to be criticized in view of the dangers of barium ingestion in the presence of intestinal obstruction; occasionally elective instances may indicate such.

The management is proximal ileotomy with removal of the calculus. The mortality reports vary from 10 per cent by Turner[7] to 89 per cent by Moller[8] with an average of 50 per cent.[4] This seems unduly high and is not likely due to delay because of diagnostic indecision and the age of the patients which, as previously noted, averages 66 years.

The resultant cholecysto-enteric fistulas have been hypothesized to result from a combination of acute cholecystitis and choledocholithiasis. The site of the fistulas

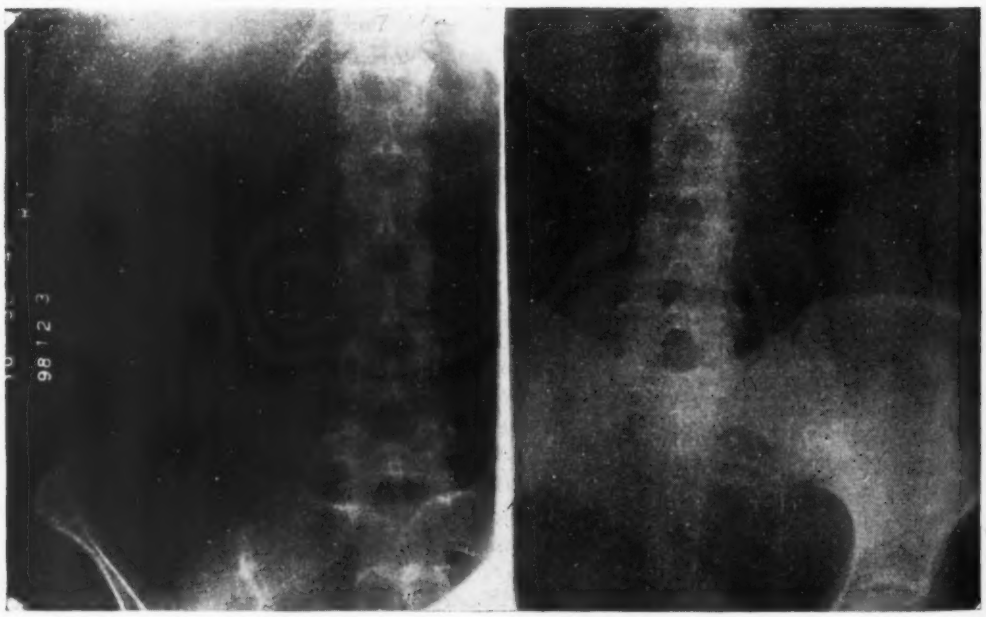

Figure 1

Proximal ileotomy with removal of the obstructive calculus (5x4 cm.) was performed by Dr. J. D. Rives; the longitudinal ileotomy was sutured transversely. The postoperative roentgen study revealed the cholecystoduodenal fistula as illustrated.

Figure 2

The management of the biliary fistula became a separate problem in ensuing months. Twelve months subsequent, persistent cholangitic symptoms of intermittent fever with chills and emesis indicated cholecystectomy with closure of the cholecytoduodenal fistula. Exploration in the common duct revealed no dilatation and no calculi; common duct drainage was instituted.

Pathologic study of the removed gallbladder revealed no finding of significance.

The patient is now asymptomatic.

is most frequently cholecystoduodenal (57 per cent), cholecystocolic represent 18 per cent and cholecystogastric are least frequent (4 per cent). Multiple involvement occurred in eleven of the Mayo Clinic 176 cases.[3]

It is generally conceded that immediate surgical attack upon the fistula is contraindicated. Elective correction is usually not favored for it is proved that many fistulas close spontaneously. However, for specific indications such as existed in our case, that is, evidence of persistent fistula and manifestations of recurrent cholangitis, surgical management is imperative provided the risk is not prohibitive.

SUMMARY

An interesting illustrative case is presented of gall stone ileus in which a roentgen preoperative diagnosis permitted surgical relief of obstruction and subsequently evaluated persistent cholecystoduodenal fistula as the source of ascending cholangitis and indicated corrective operation.

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INTESTINAL OBSTRUCTION FOLLOWING THE USE OF COTTON

REPORT OF TWO CASES

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Recently I reported a case of intestinal obstruction following the use of cotton suture material, pointing out how easily one might permit a piece of waste to remain or find its way into the abdomen. Before this case report was actually published another similar case presented itself. This double occurrence in rapid succession under the supervision of one surgeon may be highly coincidental and rare; however, the fact that these cases did occur emphasizes the great danger of carelessness in the use of cotton.

One need never worry about this act of carelessness when using chromic, for in three or four days the material is absorbed. Chromic promotes a polymorphic leukocytic reaction which disintegrates the material. Cotton, on the other hand, promotes fibrosis, a proliferation of fibroblasts, which encapsulates the material and through its con-

traction tends to constrict the tissue in its vicinity.

If this catastrophy, intestinal obstruction, continues to occur it will become a most serious contraindication to the use of cotton suture material within the abdomen. Mindful of this possible complication, I have largely discontinued the use of cotton within the abdomen, although I still use it exclusively in the fascia, for I believe that cotton material is unexcelled in this particular phase of surgery.

CASE REPORT NO. 1

I. M., a white female, aged 21, had had an appendectomy in 1940 and cotton was used in the procedure. On January 9, 1943, she was taken with severe abdominal pain and vomiting. The following day she was admitted to the hospital, where a diagnosis of intestinal obstruction was made, clinically and roentgenologically. She was prepared for an operation. Inspection of the peritoneal cavity revealed collapse of the ileum and of a portion of the jejunum with dilatation above the constricted area. Exploration of this area revealed a band circumscribing the gut, the ends of which attached to the mesentery. When the band was removed it had the appearance of a piece of cotton. It was studied microscopically and verified as such.

CASE REPORT NO. 2

Mrs. L. M., aged 27, a white female, was admitted with vomiting, distention, and x-ray evidence of intestinal obstruction. She had been operated upon at another hospital for acute appendicitis in 1942. Her record revealed that she had been sutured with cotton and had an uneventful recovery until her present illness. Exploration of the abdomen through right rectus muscle splitting incision showed evidence of obstruction. The upper ileum was constricted by a band which extended from the mesentery to the opposite side of the mesentery. It was about five centimeters long. Recovery was uneventful. The pathologic report revealed the band to be a fibrosed encapsulated piece of suture material.

Two such cases occurring in quick succession lead me to reiterate: when using cotton, let us be ever mindful of the excess. Also it might be interesting to examine more closely the bands we find in cases of obstruction, for many of them may be encapsulated non-absorbable suture material, left-overs from a previous operation.

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A CLINICO-PATHOLOGIC CONFERENCE

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and
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The following is an abstract of the history of a patient who died in Charity Hospital and who presented a little appreciated cause for hypertension.

N. H., a colored female aged 34, was admitted to the hospital on October 20, 1944, with a chief complaint of "high blood pressure." She had been complaining of headaches and spots before her eyes ever since pregnancy and delivery in June, 1944. She also stated that she had dyspnea on exertion. For approximately one month prior to admission she had attended the medical clinic, where her complaints were the same. In clinic she had been put on a diet and given some small white pills for her blood pressure. Her appetite had been poor for some time. The past history was essentially negative, except that on June 26, 1944, she was admitted to the obstetrics service in the seventh month of pregnancy, at which time the diagnosis of toxemia of pregnancy was made. She delivered of a stillborn fetus and made an uneventful recovery.

Physical Examination: The patient was a fairly well developed and well nourished colored female who appeared rather drowsy. Blood pressure was 212/140, pulse 100 and respirations 24. The pupils reacted slowly to light; bilateral papilledema was present. Examination of the heart revealed the PMI in the sixth interspace in the midclavicular line. The rhythm was regular; aortic second and apical sounds were increased. No murmurs were heard. The liver was palpable two finger breadths below the right costal margin, and was tender. No ankle edema was present.

Laboratory Findings: Urine, alkaline; sp.gr. 1.008; albumin 2+; sugar negative; microscopic negative. Kline negative on October 21, 1944 and on October 24, 1944. Blood chemistry on October 21, 1944, urea nitrogen 95; creatinine 20.5; on October 24, 1944, urea nitrogen 154; creatinine 26. Electrocardiogram (in clinic) September 22, 1944, suggestive of left ventricular hypertrophy, otherwise normal.

Course: The patient was afebrile. She was put on a salt free diet, absolute bed rest, phenobarbital, grain ½ three times daily, and was given 3000 c.c. of fluids daily. Urinary output was appar-

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ently satisfactory, but was not charted very carefully. On October 24, 1944, she became dyspneic, complained of chest pain, and had an episode of nose bleed. The dyspnea became worse, and nasal oxygen was administered. On October 23, 1944 there were rales in her lungs. She was given morphine grain one-sixth and started on digitalis. Her condition continued poor. On October 24 she began to excrete only very small amounts of urine, and it was necessary to catheterize her. It was noted that there was urea frost on her face. On October 26 she developed Cheyne-Stokes respiration, pulse became largely imperceptible, and the patient expired.

Dr. Burch: Obviously from the clinical record, this patient had a disease associated with hypertension and heart disease with acute left ventricular congestive heart failure. In a patient of this age with the data described above, there are just four disease states which could explain this picture:

1. Terminal hemorrhagic nephritis;
2. Malignant essential hypertension;
3. Chronic pyelonephritis;
4. Congenital polycystic kidneys.

The data are insufficient to rule in or out any one of the four conditions with any degree of certainty. The absence of a definite history of acute hemorrhagic nephritis tends to eliminate chronic active hemorrhagic Bright's disease as a diagnosis.

The diagnosis of pyelonephritis is usually not difficult to make if the patient is properly studied. Catheterized bladder urine will show evidence of infection; for example, pus cells and bacteria. The bacteria and white cells indicate pyelitis if found in urine collected directly from the kidney pelves. Casts, red cells and impaired renal function indicate nephritis. This patient was deprived of these studies.

Essential hypertension could be accepted as the diagnosis after the other three possibilities had been eliminated. With proper studies, pyelonephritis and congenital polycystic kidneys could have been definitely ruled in or out clinically. With pregnancy any type of renal disease is apt to be exaggerated, although in a recent issue of the Journal of Clinical Investigation a study is presented which indicates that pregnant women get along well in the presence of glomerulonephritis. Pyelitis is a very common complication of the later stages of pregnancy. It is impossible to learn from the history the time of onset of the disease responsible for the patient's death.

The diagnosis made on the obstetrical service was toxemia of pregnancy, a vague and inadequate term in this instance in view of the progress of the disease with the resultant death. Obviously, it was not true eclampsia of pregnancy because, as we know, if the patient survives the acute episode, the recovery is said to be complete. This patient had some sort of kidney disease that was precipitated or exaggerated by the last pregnancy. In our colored medical service we have seen a great number of patients with pyelonephritis, especially following pregnancy. Complete clinical surveys are made routinely in most patients who enter with hypertension; this includes a good urologic examination. Not only are the pelves visualized but the function of each kidney is studied individually. Frequently the diagnosis of pyelonephritis follows.

Only a guess can be made as to the cause of death in this patient. It is impossible with the data available to make a satisfactory diagnosis. The patient most likely had pyelonephritis as the primary disease. Chronic pyelonephritis often presents a picture identical with that of essential hypertension and chronic hemorrhagic Bright's disease. Pyelonephritis, of course, has a known cause; the others do not. In the final stage of old chronic pyelonephritis, fever may be absent and infection or previous pelvic infection not suspected.

The patient obviously had true uremia. This physiologic diagnosis is certainly correct, regardless of the primary underlying renal disease responsible for the renal failure.

The heart was diseased. The etiology was hypertension and nephritis. These factors damaged the myocardium and the former added an extra load on the heart. The patient's heart was large. The anatomic change must include cardiac hypertrophy.

I do not think there was myocardial infarction. The physiologic diagnosis was normal sinus rhythm, and congestive heart failure, right and left; left, because of the dyspnea and rales in the chest, and right because of the large liver, probably an expression of the increase in systemic venous pressure. The functional state was Class IV. There must have been a terminal bronchopneumonia, an entity to be expected in such patients.

Resident: Would you classify the nephrosclerosis?

Dr. Burch: If the patient had had uncomplicated kidney damage in association with essential malignant hypertension, it would have been malignant nephrosclerosis. A patient is not considered to have benign nephrosclerosis and malignant hypertension simultaneously. These two clinical states do not occur together. In other words, essential hypertension is associated with nephrosclerosis as the renal counterpart of the hypertensive syndrome. Thus:

1. Benign nephrosclerosis is seen in association with benign essential hypertension.

2. Malignant nephrosclerosis is seen in association with malignant essential hypertension.

Student: What about hypertensive encephalopathy?

Dr. Burch: The patient had papilledema which is a part of the malignant state of the hypertension. I do not think a diagnosis of hypertensive encephalopathy can be made since the patient did not have true eclamptic seizure of a mild or severe sort. True uremia explains the mental state and much of the clinical state. Because of the high blood pressure and eyeground findings a malignant phase of some type of hypertension was present.

Dr. Platou: What is the frequency of hypertension with early pyelonephritis in adults?

Dr. Burch: I do not know, but on our service it appears that the majority of cases present hypertension as a part of the picture.

Dr. Platou: I ask this question because it has been our observation in children that hypertension commonly accompanies pyelonephritis.

Dr. Dunlap: Dr. Burch, would you care to enter your final diagnoses on the blackboard?

Dr. Burch: Clinical Diagnoses:

I. Chronic pyelonephritis
II. True uremia
III. Heart disease
  a) hypertension and nephritis
  b) enlargement
  c) normal sinus rhythm, congestive heart failure (right and left)
  d) Class IV.
IV. Bronchopneumonia with possible pulmonary infarcts.

Dr. Dunlap: Could we now have an idea of the students' diagnoses on this case?

Dr. Pullen: Malignant nephrosclerosis 17, benign nephrosclerosis five, chronic septicemia four, toxemia of pregnancy six, essential hypertension 26, and hypertensive encephalopathy one.

Dr. Dunlap: We do not seem to have many students agreeing with Dr. Burch. I would like to begin by complimenting Dr. Burch on making an anatomic diagnosis. I have known clinicians who do this routinely and I consider it an excellent habit. Modern medicine began when physicians in general began to take an interest in anatomic diagnoses about the middle of the last century and encouraged autopsies on their own patients. I do not think any physician can hope to treat disease states successfully unless he has a clear idea of what he is treating. His mental picture of the disease should not be limited to pathologic anatomy but should include morbid physiology and chemistry. Dr. Burch has made such a diagnosis for you. I might say that his diagnosis is somewhat more successful than the students' diagnoses. He is still ahead of you.

This patient, to begin with, had a big heart—it weighed 400 grams, and in the absence of valvular or other lesions, we consider this very good evidence of hypertension of some standing. The principal

enlargement was of the left ventricle, the ventricle which was pumping against the high systemic blood pressure. In addition, the patient had pulmonary edema. Some regions of pneumonic consolidation were also found. Microscopically, we found edema and an early inflammatory exudate in the alveoli, indicating an early hypostatic bronchopneumonia. The most important pathologic change was present in the kidneys. I hold both of them here. One weighed 90 grams and the other weighed 50 grams or a total of about half the normal weight of the kidneys. This kidney, as you will see when I pass it around, has been reduced to a shell of kidney substance surrounding a dilated pelvis. The distance between the tips of the calyces and the outer surface of the kidney measures about 2 mm. The dilatation of the pelvis is sufficient to indicate that pyelonephritis is the probable disorder since neither nephrosclerosis nor glomerulonephritis produce pelvic dilatation. The other kidney shows similar changes but not in such an advanced stage. The capsule of the kidney was so adherent to the renal substance that it could not be separated readily. This is the result of scar formation in the cortex of the kidney. On these gross findings alone, Dr. Burch's diagnosis of pyelonephritis is well supported. Microscopically, we found some further evidence in confirmation of this diagnosis which I will show you in lantern slides.

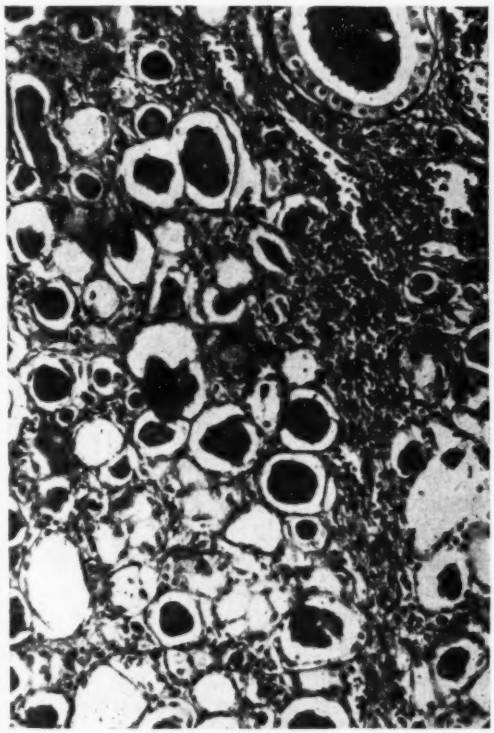

Fig. 1. Kidney showing pyelonephritis. Inflammatory cells are present infiltrating the interstitial tissue. The tubules are dilated and hyalin casts are present in the lumens.

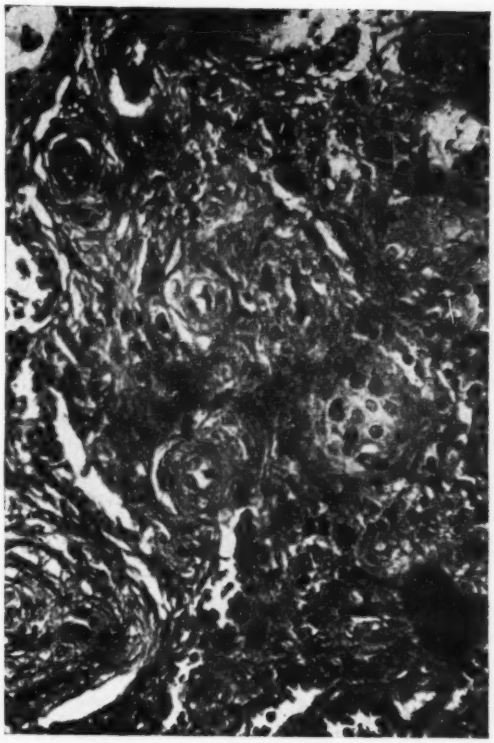

Fig. 2. Kidney: The photograph shows extensive proliferation and thickening of the walls of small arteries and arterioles. Similar changes are often seen in benign nephrosclerosis.

I might say a few words about the hypertension which was the most striking clinical sign of disease in this patient. The work of Goldblatt and others who have investigated the importance of kidney dis-

ease as an etiologic factor in hypertension is sound and valid, but I do not think we should lose sight of the fact that there are causes of hypertension other than impaired renal circulation. There is, for example, an important neurogenic factor in many cases. In the series of kidney biopsies examined by Castleman at the Massachusetts General Hospital, taken from patients who were subjected to sympathectomy in an attempt to relieve hypertension, damage of the arterioles of the kidney was present in most cases, but in seven patients with established hypertension, no such changes were found. This certainly suggests that hypertension may occur independent of prior organic disease of the renal arterioles. Even when the arterioles of the kidney do show hyalin or necrotic changes it does not necessarily prove that the change in the kidney vessels came first and caused the hypertension.

Returning to this particular case, I think it is very likely that this woman had pyelonephritis during her last pregnancy, and probably in preceding pregnancies since the renal changes are old. As Dr. Burch has told you, pregnancy is a difficult and dangerous experience for any woman with kidney disease, since the hazard of acute complications is increased and pregnancy may often initiate further kidney damage. Pyelonephritis is one of the common complications of pregnancy whether or not the patient had previous kidney disease. Pyelonephritis of pregnancy has been attributed by some authors to pressure of the enlarged uterus on the ureters as they cross the pelvic brim with resulting obstruction and infection. Roentgen studies have shown, however, that dilatation of the ureters often extends down to the bladder, well below the probable point of mechanical compression. More recently it has been appreciated that there is some degree of physiological dilatation of the ureters in almost every pregnancy. They often become as large as a centimeter in diameter. This is apparently a manifestation of a decreased tone of smooth muscle throughout the body during pregnancy which may also give rise to other clinical manifestations such as hypotension, biliary stasis and constipation. As you know, when stasis occurs in the natural channels of the body, particularly in ducts, it predisposes to infection. Stasis in the ureters due in part to mechanical obstruction and in part to physiologic dilatation is the most probable precipitating cause of the pyelitis of pregnancy. In a pregnant woman with kidney disease, pyelonephritis may be suspected but glomerulonephritis and arteriolar kidney disease must be ruled out. Acute pyelonephritis often elevates blood pressure but after the infection has subsided, we expect the hypertension to disappear in whole or in part. Recurrent or progressive pyelonephritis may give rise to a recurrent or permanent hypertension. As Dr. Burch has pointed out, there is little difficulty in diagnosing acute pyelonephritis. In the chronic and healed stages, it is not so easy since the patient may be left with a great deal of destruction of kidney substance and loss of many functioning nephrons but without much active progressive disease in the kidneys. In the absence of active kidney disease, the urine contains few abnormal constituents. When an added burden is thrown upon such a kidney the number of functioning nephrons may be insufficient to clear the blood of the products of metabolism and uremia may appear. I think this concept is important. In the quiescent phases of advanced glomerulonephritis, vascular nephritis, or pyelonephritis, one may fail to recognize renal disease because the urine contains little in the way of albumin, casts, red cells or white cells. At autopsy in such patients, we find kidney changes such as you see here, a small shrunken kidney with many of its functional elements destroyed, but with little active progressive disease. Albumin, white cells, and red cells appear only in urine which is being secreted by nephrons that are diseased. At the time the kidneys fail the disease may be almost static, and the failure may be due to the fact that there are too few nephrons still functioning to maintain life.

Another point I would like to make is that although various disorders of the kidney may start in a different fashion, as the disease progresses they approach a final common path in terms of pathologic changes. That is, in glomerulonephritis the initial lesions are confined chiefly to the glomeruli. However, in the chronic stages we see not only glomerular changes but atrophy of tubules and thickening of the arterioles very similar to that seen in nephrosclerosis. In like fashion the later stages of nephrosclerosis are characterized by changes in the glomeruli and atrophy of the tubules in addition to the vascular changes, giving a final picture somewhat similar to that of long standing glomerulonephritis. Even in pyelonephritis, beginning as an acute bacterial infection of the kidney, we may see in the later stages changes in the glomeruli suggestive of glomerulonephritis and arteriolar damage suggesting nephrosclerosis. I would like to show you now some lantern slides prepared from the kidneys of this patient. You will see that there are well developed glomerular, capsular and vascular changes in addition to the chronic inflammatory lesions of pyelonephritis.

We have then a case of a woman who died in the late stages of chronic pyelonephritis with hypertension, cardiac hypertrophy, heart failure, terminal uremia, pulmonary edema, and bronchopneumonia. The disease can be diagnosed as pyelonephritis even though we do see glomerular and vascular changes in addition to the characteristic interstitial inflammation and scarring.

Dr. Burch: There are a few comments I would like to make; first, concerning the terminology used by the students. A common mistake is made here. The term "chronic nephritis" is not complete or precise enough. "Toxemia of pregnancy" is another example of vagueness. Express your diagnosis completely and in good concrete terms in order to be clear and precise.

There is a tendency in the handling of obstetric patients to neglect the postpartal follow-up. This patient illustrates this error. If she had been carefully followed postpartally, it is likely that the pyelonephritis would have been recognized soon after its onset. All patients should be followed after delivery. This should include a complete periodic health examination consisting not only of a pelvic examination but a complete inventory of health for many years, not for just a short time. If this patient had been examined carefully postpartally, the diagnosis would have been established. A six weeks' postpartal study consisting of one pelvic examination is of little value. Many complications caused by or precipitated by pregnancy, could be detected, treated early and properly but only if patients are followed properly and long enough. All patients who become pregnant should see an internist during and after pregnancy in order to take an inventory of the effects of pregnancy. A failure to make use of such examinations is one shortcoming in preventive medicine.

Dr. Dunlap is certainly correct in asking that every one make a complete diagnosis. Remember as students of medicine that you cannot manage a patient properly without thinking in terms of all phases of his disease. If you fail to do this, the study is only superficial and so is his physician in his thought. Visualize a disease from all of its expressions, physiologic, chemical, pharmacologic, pathologic and so on. All good physicians do this routinely and without effort and by all means do not forget the psychiatric aspects of all organic as well as functional diseases.

NEW ORLEANS
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OUR LATE PRESIDENT

The sudden and unexpected death of Franklin Delano Roosevelt has had many repercussions throughout the country. The great bulk of the American population apparently felt that the death of their President was a real catastrophe. In the troubled war-time waters that our ship of state is now navigating, the citizenry sensed that in Mr. Roosevelt they had a captain who could best pilot them into the safe harbor of peace. The immediate reaction to his death was the feeling that he could not be replaced. While many citizens did not agree with Roosevelt's domestic policies, they felt that in the field of foreign activities he was the only real diplomat in the country; that he alone was familiar with the chancelleries of Europe and that he alone was capable of dealing with the dual masters of international politics, Churchill and Stalin. Now that some days have passed since the death of Mr. Roosevelt, the people are beginning to adjust themselves to the idea that no man is absolutely indispensable and that always the people of the United States have had the good fortune to have some man arise, in times of crisis, capable of meeting the emergency. The new President has already been successful in obtaining from Premier Stalin the assignment of Mr. Molotov to the San Francisco conference, so that it is quite possible that President Truman will be equally successful in international politics, although accomplishing his purposes by more direct and blunt methods than Mr. Roosevelt employed.

At home and in domestic fields Mr. Roosevelt undoubtedly motivated many of the semi-socialistic bills which have appeared in Congress which have to do with the physician. His intimate friendship with Senator Wagner would certainly confirm this statement. His desire to regiment the medical profession was expressed by him many times, not of course in such phraseology but at least, by indirection, indicating that the Federal government should take over the supervision of the medical care of a very large section of the general population of the United States. What Mr. Truman will do about socialized medicine we cannot tell at the present moment but undoubtedly there will necessarily be a great deal of objection in Congress to any great increase in Federal spending. Unless pushed by the chief executive of the country, large expenditures for unproved socialistic schemes will not be approved by the Congress in the next few years. This is said advisedly, as after the war the United States will have an enormous debt; the servicing of this debt alone will cost

more than our yearly expenditures in days prior to World War II. To fail to reduce taxes after the war is over will certainly be an economic error and a bad political move but if all the schemes for great expenditures of money are to be legislated, taxes will not be decreased but will have to be increased.

Although many of us disapproved of the domestic polities of Mr. Roosevelt, and this applies not only to the professional man but to the business man, we cannot but concede that his conduct of the war has been carried out with a strong hand, an intelligent mind and a clear vision. Undoubtedly Mr. Roosevelt will be accorded in history recognition as one of the great Presidents of this country.

JACOB C. GEIGER

The author of the address delivered to the graduating class of Tulane Medical School last fall, and published in this number of the Journal, is a Louisianian who has made good far from his native state. Dr. Geiger was born in Alexandria, where members of his family still reside. He graduated from Tulane Medical School in 1912 and received the degree of Doctor of Public Health in 1919. In 1935 he was given the honorary degree of Doctor of Science by the Louisiana State University and in the autumn of 1944, an honorary Doctor of Laws from Tulane University.

Shortly after graduation, Geiger moved to California where he became connected with the California State Board of Health. He has remained since then on the Pacific Coast, with the exception of a period of four years when he was Assistant Commissioner of Health in Chicago. Returning to San Francisco, he was placed on the medical faculty of the University of California as well as Stanford University. For nearly thirteen years he has been the chief health officer of the City and County of San Francisco, with the title of Director of Public Health. In addition to his public health responsibilities, he also has under his jurisdiction the excellent San Francisco City Hospital which is used as a teaching institution by the two San Francisco medical schools. Besides the honorary degrees from Louisiana State University and Tulane University, Geiger has been similarly honored by Santa Clara University and the Hahneman Medical College. He has been decorated by the Chilean government, by the Chinese Government, by the Brazilian government, and by the government of Cuba. He has been cited by the government of Panama for distinguished and distinctive service in public health.

It is a pleasure to record the accomplishments of a loyal Louisianian, a physician who has made a distinct success in his chosen field of medicine, a man who has accomplished much, often against strong political opposition, in making the City of San Francisco one of the outstandingly well managed cities of this country from the broad aspects of public health.

THE WATERHOUSE - FRIDERICHSEN SYNDROME

There has been an ever increasing interest in this syndrome which was first described by Waterhouse in 1911. The reason for this acceleration of interest lies in the fact that there have been an increasing number of cases of meningococcic meningitis all over the United States. While this syndrome is supposed to occur with any severe bacteriemia, in the great majority of cases the meningococcus is the implicated organism and indeed it may be that it is the only organism in spite of the fact that the pneumococcus and *H. streptococci* have been inculpated.

D'Agati and Marangoni* report on six cases that they had the opportunity of observing in a station hospital. This is a very large number of cases for any one man to see and probably explicable on the basis that these two medical officers had charge of the meningitis wards, in which instance

*D'Agati, V. C., and Marangoni, B. A.: The Waterhouse-Friderichsen syndrome, New England J. M., 232:1, 1945.

they would have the opportunity of seeing a large number of these cases.

In the past, undoubtedly the Waterhouse-Friderichsen syndrome has been considered merely to be a fulminating type of meningitis without recognition of the underlying pathologic lesions which are represented by bilateral adrenal hemorrhages and, if the patient survives 24 hours, increase in the size of the heart, pleural effusion, severe hepatic and pronounced renal damage in the cases with prolonged survival periods.

The clinical features are characterized by prodromal symptoms similar to any infection of the upper respiratory tract. The authors state that the onset of the bacteriemia is sudden and dramatic, associated with a petechial eruption which soon becomes purpuric. These hemorrhagic skin lesions occur all over the body, varying in size from minute petechiae to large purpuric areas. There may be a temporary delirium but mental clearness is usually present. The temperature is not unduly elevated and soon drops to normal. This is probably evidence of shock. The blood pressure is extremely low but if the initial shock is survived, blood pressure figures may rise to normal. There is an anuria which again, if the patient survives 24-36 hours, is followed by oliguria. There is an extremely high polymorpho-leukocytosis and marked albuminuria. The spinal fluid, in the six cases reported by these two authors, was negative although the cultures in three cases were positive for the meningococcus. This is a somewhat different finding than in the instances of the several cases observed in New Orleans, in which the spinal fluid showed an increased cell count with increased spinal pressure as well.

The majority of the patients succumb within 24 hours; occasionally one survives for 48 hours or longer, and there have been several patients in whom death did not occur. Postmortem examinations showed pleural effusion and pulmonary edema in every one of the five bodies that came to autopsy in the present report. The heart weight varied from 300-590 grams. The liver was markedly enlarged; the kidneys not unduly. In every instance there were bilateral moderate to severe adrenal hemorrhages.

The treatment of this condition is to overcome shock, toxemia and bacteriemia; the first by the usual methods of fluid, heat and plasma; the toxemia, and the bacteriemia, is combatted by 100,000 units of antimeningococcic serum, plus huge doses of sulfadiazine. These authors gave five grams intravenously at the onset and eight grams orally followed by large oral doses with a total of 25-30 grams administered within the first 24 hours. Most clinicans who have recognized the Waterhouse-Friderichsen syndrome have given adrenal cortical hormone therapy. While these military recorders state that its value is questionable, this is not in accord with the general ideas about the treatment of the disease. It would seem logical to give large doses of the specific adrenal hormone.

While it hardly seems necessary to lay stress on a syndrome which is apparently so invariably fatal, if it comes to be generally recognized undoubtedly there will be found patients who are not so severely attacked and if the condition is recognized the life of that individual may be saved by very intensive, properly employed therapy.

ORGANIZATION SECTION

The Executive Committee dedicates this page to the members of the Louisiana State Medical Society, feeling that a proper discussion of salient issues will contribute to the understanding and fortification of our Society.

An informed profession should be a wise one.

POSTWAR MEDICAL PLANNING

Everyone at present is planning for postwar conditions and the Louisiana State Medical Society, in line with other groups, is looking forward to assisting their confreres who are now working in the armed

medical service. It is believed that our method of handling this problem will affect a great deal the type of medical practice we will assume in the future. Therefore this requires serious consideration by all of us.

Many groups, national, state and local, are now giving study to this subject. However we learn from speaking to the medical men who are already being mustered out of the service, that nothing material has been accomplished. There are many plans but little action, judging from the opinions given by the discharged veterans.

The State Society, as well as other groups, is actively taking a hand in trying to solve this problem and the committee appointed to consider this would appreciate any suggestions you may have to offer. These should be sent to our Secretary-Treasurer, Dr. P. T. Talbot, who will forward them to the proper individuals for study and action. All of our members, both in and out of military service, have been circularized for information but, sad to say, many have failed to answer, making the study unreliable. However from the answers received we have some definite conclusions, as follows:

Only 156 out of 622 questionnaries sent to those in military service were returned.

The greater proportion who answered, it was noted, want to practice in the larger communities; only a few in small localities.

Ninety-five per cent of those in service desire to return to private practice, showing that it will be difficult for the Government to give everyone desiring a discharge at the close of the war an immediate discharge. Only one in the group desires to remain in public health work which is a field the Government is trying to popularize at the present time.

Another conclusion which shows the trend of the medical man of today is the fact that over two-thirds want to specialize or return to a specialized practice. The old-time family doctor apparently is slowly disappearing.

Again, another observation shows that about one-half of the doctors desire refresher courses in surgery and internal medicine, which are the most popular courses requested. One-fourth desire obstetrics and gynecology and eye, ear, nose and throat, and the remaining specialties are requested by the other one-fourth who replied.

Only one of the group stated he wanted more internship but two-thirds requested residencies; the same specialties as mentioned before being the predominant ones. About one-third desire help in obtaining assistantships in university departments; also in the same proportion of popularity for the specialties as listed above.

Now, let us consider what can be done to obtain the best results. A committee of the Orleans Parish Medical Society has made certain recommendations which have been approved by that society. This committee is headed by Dr. Eugene Countiss who has taken a very great interest in this matter since the outbreak of the war. These recommendations are listed below for the information of other committees in the state who might care to duplicate and possibly improve upon this effort in their locality. If such work is successful, information could be made statewide through the State Society Committee on Postwar Planning.

Hospitals be notified of returning physicians — (Superintendents, switchboard operators and front office employees be furnished with a list of such physicians.)

Hospital positions—(The Board of Directors of the Society demand a stand on residencies from the hospitals of New Orleans; also that they write to hospitals throughout the state regarding vacancies for interns or residents.)

Office space—(Contact business managers of office buildings as to available space; real estate agents, and the Association of Commerce regarding small buildings in business section and around hospitals that may be used as doctors' offices.)

Re-circularize the doctors on the home-front—(Send another questionnaire to the doctors on the home-front as to the assistance they may render returning doctors, even on a temporary basis—ask them to

anticipate their being discharged from service and what their needs would be as to refresher courses, etc.)

Refresher courses—(Refresher courses are being offered by L. S. U. and Tulane, obtain copies of schedules and incorporate them in a bulletin and send same to the men in service—let them know what we can offer them; also in the questionnaire which is sent to the home-front doctors ascertain if they will allow a physician to accompany them on rounds, or to scrub).

List operations—(List operations at various hospitals two or three days in advance).

List clinics (free) and those in charge.

Interviewing committee—(Two men at a time appointed to serve each day to interview returning doctors, in an effort to assist them in problems presented by their return to practice).

Small business committee—(A committee of Louisiana Bankers Association be contacted regarding loans to doctors).

The Committee on Postwar Planning of the State Society has also some recommendations to be considered. These are as follows:

Arrange a meeting with building managers in each locality to see if locations can be obtained.

Meet with hospital heads of private institutions in order to see if more residencies and refresher courses can be arranged with such institutions.

Meet with the Director of the Department of Institutions to arrange for the same possibilities and ascertain if some of the returning men can be given privileges of the staff, under supervision.

The Deans of both of the medical universities are most cooperative and intend to give courses on theory; short intensive courses and also longer ones. It will not be possible to prepare a schedule, however, until a larger group indicates their desire to take these courses. It is also planned to supplement and reactivate men previously connected with the schools, on their return.

It has been suggested that all attempts be made to prevent the Government from destroying medical equipment; to encourage postwar activity and sell this material to returning service men as the surgical companies have no particular interest in this, or supplies to sell at the present time.

The Secretary-Treasurer of the Society has information on file as to possible locations and requests from doctors throughout the state for assistants.

The Postwar Planning Committee intends to meet quite frequently in an attempt to follow these suggestions and will welcome criticism, particularly constructive, which the members of the Society may have to offer. We would suggest that similar committees be appointed by the parish societies throughout the state and that their findings be forwarded to the Secretary-Treasurer. By such activity our men who are in military service will know that the State Medical Society of Louisiana did not fail them in their absence.

TRANSACTIONS OF ORLEANS PARISH MEDICAL SOCIETY

CALENDAR OF MEETINGS

May 1 Eye, Ear, Nose and Throat Staff, 8 p. m.
May 2 Mercy Hospital Staff, 8 p. m.
May 7 Board of Directors, Orleans Parish Medical Society, 8 p. m.
May 9 Clinico-pathologic Conference, Marine Hospital, 7:30 p. m.
Touro Infirmary Staff, 8 p. m.
Woman's Auxiliary, Orleans Parish Medical Society, Orleans Club, 3 p. m.
May 10 Clinico-pathologic Conference, Touro Infirmary, 12 noon.
May 14 Scientific meeting, Orleans Parish Medical Society, 8 p. m.
May 15 Charity Hospital Medical Staff, 8 p. m.
May 16 Charity Hospital Surgical Staff, 8 p. m.
May 18 I. C. R. R. Hospital, 12:30 p. m.
May 21 Hotel Dieu Staff, 8 p. m.
May 22 Baptist Hospital Staff, 8 p. m.
May 23 Clinico-pathologic Conference, Marine Hospital, 7:30 p. m.
French Hospital Staff, 8 p. m.
May 24 Clinico-pathologic Conference, Touro Infirmary, 12 noon.
DePaul Sanitarium Staff, 8 p. m.
May 25 L. S. U. Faculty, 8 p. m.
New Orleans Hospital Dispensary for Women and Children Staff, 8 p. m.

During the month of April the Society held one scientific meeting. The program which was presented by members of the Mercy Hospital Staff, was as follows: Case Report—Rupture of Ethmoids with Retrobulbar Cellulitis by Dr. H. Ashton Thomas; Case Report—Missed Labor by Dr. N. J. Tessitore; Evisceration—A Comparative Study by Dr. Vincente D'Ingianni.

The next scientific meeting of the Society will be held Monday, May 14. The program will be presented by members of the Charity Hospital Staff.

NEWS ITEMS

Dr. Clyde Brooks recently resigned as director of the department of pharmacology and experimental therapeutics in the L. S. U. school of medicine to become dean of Essex College of Medicine and Surgery, Newark, N. J. The Society extends to Dr. Brooks its congratulations and best wishes.

Drs. Donovan C. Browne and George Taquino recently attended a meeting of the Iberville Parish Medical Society of Plaquemine. Dr. Browne spoke on Liver Disorders; Dr. Taquino on Sinus Diseases in Children.

Dr. J. W. Davenport, Jr., spent a week in the Rh blood testing laboratory with Dr. Philip Levine at the Ortho Research Foundation, Linden, N. J. While there Dr. Davenport also visited Dr. A. S. Wiener in his laboratory and blood and plasma laboratories of the following institutions: Blood Transfusion Association, New York City; New York Post-Graduate Medical School and Hospital; and Johns Hopkins Hospital, Baltimore.

Drs. John L. DiLeo and M. L. Michel were recently certified by the American Board of Surgery.

Dr. E. Carroll Faust spoke on Bubonic Plague in the Western Hemisphere at a meeting of the History of Medicine Society recently held in the Tulane student center building.

Dr. Ralph V. Platou spoke on Problems of the Spastic Child at a meeting of the International Council for Exceptional Children recently held in Charity hospital.

Drs. E. F. Salerno and John M. Whitney were guest speakers at a recent meeting of the Lakeview Civic and Improvement Association.

Dr. Chester A. Stewart spoke on The Care of Tuberculosis at a recent meeting of the Crossman Co-operative meeting.

Dr. George W. McCoy attended a meeting of the National Foundation for Infantile Paralysis in New York City, March 13-14. Dr. McCoy also attended a meeting of the United States Pharmacopoeial Revision Committee in Washington, March 16.

RESUMPTION OF PRACTICE

Drs. Ignatius DeMatteo, Chester Fresh and David Womack.

HOSPITAL NEWS

At the March meeting of the French Hospital Medical Staff the following officers were elected: Dr. Lucien C. Delery, chairman; Dr. Nicholas Chetta, vice-chairman; and Dr. O. D. Thomas, secretary-treasurer.

NEWS OF MEMBERS IN MILITARY SERVICE

Lt. Col. Robyn Hardy writes from Belgium—"It does one's heart good to know that he is not forgotten by his friends even though he is many miles away. We are having quite a war over here but are now headed for victory. Nothing you can do can compare with the courage of our boys in the front line. We see them soon after they are wounded. They are the finest ever. Don't let them down."

Lt. Daniel W. Beacham states that he has arrived with the 231 General Hospital in France, where it is "cold and muddy."

RECENT PROMOTIONS

From Lt. Colonel to Colonel: R. H. Turner, Oscar Blitz and Charles J. Miangolarra.

From Major to Lt. Colonel: Lawrence H. Strug and J. O. Weilbaecher, Jr.

CALLED TO MILITARY SERVICE

Drs. William L. Bendel, Jr. and George T. Mellinger, both intern members of the Society, were recently placed on the military rolls.

NUTRITION COMMITTEE

This Society appointed, at the request of the local Office of Price Administration, a Liaison Committee between this Society and that organization, for the purpose of consulting with them in an effort to clarify some of the confusion on physicians' prescriptions for additional points for rationed foods.

There is a certain standard requirement set up by the Council on Foods and Nutrition, which the OPA follows, which does not meet the individual needs of every community. Therefore, it is the purpose of this medical advisory committee to give counsel on the exceptions as requested by the physicians. The OPA is not bound by our advice, but have certainly shown their willingness to cooperate in solving our local problems without recourse to regional boards outside this community.

The committee has encountered difficulty in evaluating request because of insufficient data, and in an effort to facilitate matters, a standard request blank is to be sent to each physician for completion when requesting additional points for rationed foods. This will not only simplify the physicians' problem, but will facilitate the work of this committee. These request blanks will be available at local War Price and Rationing Boards.

There will appear in the Bulletin from time to time certain broad dietetic standards for your guidance, which may be helpful in making your request.

This committee meets twice a month (second and fourth Thursdays), and will be glad to meet with any physician having suggestions or to discuss particular problems arising.

Donovan C. Browne, Chairman.

DePAUL SANITARIUM STAFF MEETING

The following report was received from Dr. Louis J. Dubos, Secretary:

The regular monthly meeting of the Medical Staff of DePaul Sanitarium was called to order at 8:00 p. m. on March 22, 1945, with Drs. Friedrichs, Holbrook, Watters, Otis, H. Colomb, A. Colomb, May, Connely, Unsworth, Hill, Thompson, Anderson and Dubos in attendance.

The scientific part of the program was ushered in by Dr. Otis presenting the record of a death of Mrs. E. B., case No. 3572, a dementia precox patient given insulin shock therapy with resultant death which was due to acute dilatation of the heart and edema of the lungs presumably following hyper-insulinism. This was the first fatality occurring at DePaul since shock therapy had been employed. The case was discussed in detail by Drs. Holbrook, Dubos, Unsworth and H. Colomb.

Next Dr. Watters gave some progress notes on case No. 3684 presented at the meeting of January 25, 1945, as one of headache, arriving at the conclusion that these headaches were probably due more to an emotional outburst then to migraine. He based his opinion on the fact that they occurred oftener over the week-end which she spent with her mother and at which time frequent quarrels led to emotional strain which invariably precipitated an attack of headache.

Finally, Dr. Otis presented case No. 3460 as one of probable precox in a young, married woman, who gave birth to a baby in September, 1944, followed by blankness, disinterest, muteness and hysteria. She was given a few electroshock treatments with little result, then later placed on insulin shock therapy, but these had to be discontinued because of a progressive fall in blood pressure beyond the margin of safety. At the present time she is again on electroshock treatments and seems to show some slight improvement. This case was discussed by Drs. Holbrook, Unsworth, Watters and Dubos.

When requested by the Chairman to say a few words, Sister Anne stressed the need of more autopsies so that our minimum percentage could be maintained.

Dr. Holbrook suggested that the Sisters endeavor to secure autopsies by speaking to the families as the prognosis became more grave and in this way gain their consent in advance. Dr. Holbrook voiced the opinion that the families of patients should not seek information about any patient from the hospital personnel but should contact the physician for such information. Dr. H. Colomb suggested that the rule of the Institution henceforth be that no information should be given over the phone except in cases of emergency and this suggestion seemed acceptable to all present.

Dr. H. Colomb moved that a committee be appointed to study a means of presenting to the medical profession in the State the purposes, principles and methods of proper admission of patients into DePaul so as to avoid later friction with the families and their physicians. This motion was seconded by Dr. May and carried, after which the Chairman appointed Drs. Holbrook and H. Colomb to serve on this committee.

As several antique mahogany bookcases had recently been purchased by Sister Anne for the library, Dr. Holbrook arose and suggested that the library should be enlarged at DePaul and that the various staff members contribute toward this end. Sister Anne said that she would gladly cooperate by budgeting a fund for this purpose. Consequently Dr. Holbrook made a motion, seconded by Dr. Otis that a committee be appointed to study the purchase of new books and periodicals for the formation of a library, which motion was carried, and the Chairman immediately appointed Drs. Friedrichs, Anderson and Thompson to serve on this Committee with Dr. Friedrichs as Chairman.

LOUISIANA STATE MEDICAL SOCIETY NEWS

CALENDAR

PARISH AND DISTRICT MEDICAL SOCIETY MEETINGS

Society	Date	Place
East Baton Rouge	Second Wednesday of every month	Baton Rouge
Morehouse	Second Tuesday of every month	Bastrop
Orleans	Second Monday of every month	New Orleans

Ouachita	**First Thursday of every month**	**Monroe**
Rapides	**First Monday of every month**	**Alexandria**
Sabine	**First Wednesday of every month**	
Second District	**Third Thursday of every month**	
Shreveport	**First Tuesday of every month**	**Shreveport**
Vernon	**First Thursday of every month**	

SEVENTH DISTRICT MEDICAL SOCIETY

The following officers have been elected by the Seventh District Medical Society for the year 1945: President, Dr. S. R. Henry, Crowley; Vice-President, Dr. J. J. Stagg, Jr., Eunice; Secretary-Treasurer, Dr. Fred C. Winn, Crowley.

AMERICAN MEDICAL ASSOCIATION HOUSE OF DELEGATES MEETING DEFERRED

It was intended that a meeting of the House of Delegates of the American Medical Association should be held in Chicago late in May or some time during the month of June.

After conference with official representatives of the Office of Defense Transportation in Washington, I am quite convinced that permission to hold a meeting at that time can not be had. I was advised to file an application for permission to hold a meeting of the House, to agree that attendance should be held to a minimum and to hold the meeting much later than originally contemplated.

A letter is going forward to all members of the House of Delegates whose names and addresses are available so that they may be informed that the 1945 meeting of the House must be deferred.

As soon as necessary arrangements can be made, an announcement concerning the time and place of the meeting of the House of Delegates will appear in The Journal and all secretaries of constituent state and territorial medical associations will be informed by telegram or by letter.

Olin West, Secy.

LOUISIANA TUBERCULOSIS ASSOCIATION

The annual meeting was held on Tuesday, April 17, at the Jung Hotel, New Orleans.

The morning program included papers by Drs. John M. Whitney, I. L. Robbins and Maurice Campagna. Following this session the business meeting was held and Dr. Julius L. Wilson was re-elected president of the organization. Dr. Chester A. Stewart made an interesting report on college health programs. At the luncheon Dr. C. M. Sharp, of the U. S. P. H. S., discussed the Federal program for tuberculosis control and he in turn was followed by Dr. R. Alec Brown, who spoke on its application in Louisiana. On the afternoon program were Mr. W. S. Terry, Director of the Department of Public Welfare; Mr. Holland Hudson, Director of Rehabilitation of the National Tuberculosis Association, and Mr. Charlie Mitchell.

In the evening there was a round-table talk on the problem of what to do about the Louisiana men rejected by draft boards because of chest conditions. This was participated in by Drs. Sydney Jacobs, W. L. Treuting, R. Alec Brown, John M. Whitney, J. E. Blum and Mr. Holland Hudson.

NEWS ITEMS

Friday, April 6, 1945, Dr. Payton Rous of the Rockefeller Institute for Medical Research, New York, and on Friday, April 13, 1945, Dr. Arild Hansen, Director of Pediatrics, University of Texas, Galveston, were the guests of the Louisiana State University School of Medicine in New Orleans. While here Dr. Rous gave an address on "The Present State of the Cancer Problem" and Dr. Hansen discussed "Some Phases of Lipid Metabolism" and the "Evaluation of the Nutritional State of the Child."

Word has been received that Dr. Herbert R. Unsworth, Clinical Assistant Professor of Neuropsychiatry at Louisiana State University School of Medicine, has been appointed Attending Specialist in Neuropsychiatry at the U. S. Marine Hospital in Carville, Louisiana.

The American College of Radiology in their monthly news letter underlined the following sentiments: "You may expect the film situation to get worse before it gets better."

Scholarships for training in physical therapy under the $1,267,600 program of The National Foundation for Infantile Paralysis are available immediately for classes commencing in June and July, Basil O'Connor, president of the National Foundation has announced.

The Board of Trustees of the United States Pharmacopoeial Convention announces that they have purchased a building probably to be used only as temporary headquarters, located at 4738 Kingsessing Avenue, Philadelphia.

The Modern Hospital announces competition for an essay on the subject, "A Plan for Improving Hospital Treatment of Psychiatric Patients." These essays shall not exceed 5,000 words in length and should be sent to the managing editor of the Modern Hospital Publishing Company, Chicago, before October 1. Details of the com-

petition may be obtained at the office of The Journal.

An acute shortage of teachers prepared to conduct classes for partially seeing children has resulted in the closing of some classes and the postponement of the establishment of others. Attention is therefore called to the fact that five colleges and universities, in cooperation with the National Society for the Prevention of Blindness, are offering special courses for the preparation of supervisors, teachers, nurses, social workers and others concerned with the education of the partially seeing child.

Dr. Robert Bennett Bean, anatomist and physical anthropologist, died on August 27, 1944, at the age of seventy. From 1910 to 1916 he was on the faculty of Tulane University School of Medicine, first as associate professor and then professor of gross anatomy. Subsequently he became professor of gross anatomy at the University of Virginia.

THE INTERNATIONAL SOCIETY OF SURGERY

The Board of Regents of the American College of Surgeons has invited the International Society of Surgery, through Dr. Rudolph Matas, secretary, to make its official headquarters during the wartime emergency in the College of Surgeons Building in Chicago.

The International Society of Surgeons is the oldest and leading international forum of surgery, Louisiana membership is held by Dr. Matas, Dr. Urban Maes, and Dr. Alton Ochsner. Dr. Matas presided at the 1938 Congress held in Brussels.

CHARITY HOSPITAL

The regular monthly meeting of the Medical Division of the Charity Hospital Visiting Staff was held on Tuesday, April 17, in the auditorium of the hospital. The following program was presented: Hansen's Disease—Case Presentation, by Dr. T. Ray, discussed by Dr. G. W. McCoy; Surgical Conditions in Children; (a) Juvenile Hyperthyroidism, (b) Congenital Hemolytic Icterus, by Drs. R. Tilbury and W. Sako; Case Presentation by Dr. Platou and staff.

DR. H. WINDSOR WADE

The Journal has received a clipping from the New Orleans States of Wednesday, April 11, from Dr. Rudolph Matas. Dr. Matas in his covering letter states that "Dr. Windsor Wade graduated from Tulane in 1912, and had quite a reputation in pathology in association with Duval. He has made a great name for himself as a leprologist since he has been given charge of the Colony at Culion. He married Miss Dorothy Paul, a New Orleans girl."

The clipping is headed "In Today's News Spotlight" from International News Service. It reads as follows:

"Liberation of the world's largest leper colony on Culion island in the Philippines by American Eighth Army doughboys turned the limelight today on Dr. H. Windsor Wade, world renowned leprologist, head of the Culion medical staff for the last 15 years.

"Dr. Wade, rescued from the island last February 10 by a United States Catalina plane, first went to Culion as chief pathologist in 1922. His experience in administering to the colony's 5000 afflicted led him to world fame as an expert in treatment of the disease.

"A native of Haddonfield, N. J., Dr. Wade soon became closely identified with expansion of anti-leprosy work in the Philippines, in 1927 was co-author of a widely read book on the subject, served as editor of the International Journal of Leprosy and was honored with memberships and honorary memberships in many international medical societies, particularly those specializing in leprosy.

"Under his direction, the Culion colony afforded excellent medical treatment for the Philippine archipelago's lepers free of charge and even affected many cures, once thought impossible. His charges lived normal lives, administering their own government, until the Japs came and through starvation reduced the population from 5000 to 3000."

HEALTH IN NEW ORLEANS

The Bureau of the Census, Department of Commerce, reported that for the week ending March 17 there occurred 135 deaths in the City of New Orleans as contrasted with 113 the previous week. Of these deaths 78 were in the white population, 57 in the negroes, and 10 of them were in children under one year of age. For the week which came to an end on March 24 the total number of deaths had increased to 151, 91 of which were in the white and 60 colored, with 9 infants under a year of age. For the week which closed March 31 there was a very sharp reduction in the number of deaths, falling to 108 and divided 70 white, 38 colored, and 9 infant deaths. The low number of deaths still continued in the week which ended April 7 when there were 116 deaths recorded, 71 of which were in the white population, 45 in the colored, and 10 children under a year of age. The three year average for the corresponding week shows it to be 134 deaths.

MONTHLY STATISTICAL REPORT MARCH, 1945

Estimated Population as of July 1, 1944

White	391,000
Colored	169,000

Total	560,000
Total Deaths, All Causes	555
White	348
Colored	207
Resident Deaths, All Causes	437
White	282
Colored	155

DEATH RATES
(Per 1000 per annum for the month)

	All Deaths	Non-residents excluded
White	10.7	08.6
Colored	14.7	11.0
Total	11.9	09.4

Total Births Recorded	1,095
White	732
Colored	363
Resident Births	864
White	579
Colored	285

BIRTH RATES
(Per 1000 per annum for the month)

	All Deaths	Non-residents excluded
White	22.5	17.8
Colored	24.0	20.2
Total	21.9	18.5

INFECTIOUS DISEASES IN LOUISIANA

For the week ending March 10 there were reported to the Department of Health the following diseases in numbers greater than 10: Septic sore throat 301, measles 110, pulmonary tuberculosis 38, chickenpox 22, scarlet fever 13, and malaria and unclassified pneumonia 11 each. During this week there must have occurred an epidemic of sore throat probably following ingestion of contaminated milk. Other unusual diseases include one case of poliomyelitis and seven of meningococcus meningitis. For the week which came to an end March 17 diseases listed in the State Board of Health in numbers greater than 10 include pulmonary tuberculosis 50, malaria 33, influenza 31, chickenpox and septic sore throat each 20, mumps 16, unclassified pneumonia 13, measles 11. For the week which terminated March 24 hookworm infestation led all other of the reportable diseases, there being 90 cases listed in this particular week. It was followed by 47 cases of influenza, 42 of measles, 40 of pulmonary tuberculosis, 37 of malaria, all of which came from military sources, 19 of septic sore throat, 17 of chickenpox, 13 each of mumps, scarlet fever, and unclassified pneumonia. All the cases of malaria, it is to be noted, were contracted outside of Continental United States. The week ending March 31 contained the monthly venereal disease report. There were listed 1,560 cases of gonorrhea, 1,318 of syphilis, 25 of chancroid, 18 of lymphopathia venereum, and 7 of granuloma inguinale. The other usual diseases included for some remarkable reason 170 cases of unclassified pneumonia, then followed 67 cases of pulmonary tuberculosis, 62 of pneumococcic pneumonia, 38 of measles, 30 of malaria, 57 of influenza, 21 of mumps, 15 each of scarlet fever and septic sore throat, and 14 of chickenpox. Eleven cases of chancroid, 740 of gonorrhea, and 80 of syphilis were reported from military sources.

DR. RICHARD O. SIMMONS
(1868 - 1945)

One of the former presidents of the Louisiana State Medical Society, Dr. Richard O. Simmons, died at Alexandria on April 10, in the seventy-seventh year of his life. Dr. Simmons graduated from the Louisville Medical College in 1892 and had practiced continuously in Alexandria since that time. So highly valued was Dr. Simmons' reputation as a doctor and his services to the State Medical Society, that the 1942 meeting of the organization was dedicated to this beloved and respected physician.

Two paragraphs of the dedication tribute to Dr. Simmons reprinted from the program of this meeting give a fair estimate of the man and why this meeting was dedicated to him. These paragraphs read as follows:

"In honoring Dr. Simmons of Alexandria by dedicating the 1942 meeting of the Louisiana State Medical Society to him the organization is paying tribute to a man who has for years been actively participating in the State Medical Society's numerous functions; it is paying tribute to a beloved physician who has been progressive in his viewpoint and has put into action always the latest proved innovations in medicine.

"Of the man it might be said that his patients are devoted to him; his lovable, kindly disposition has made him a friend of every one; his honesty of character has made him a champion of everything that is of the best. Always willing to fight for high medical ethics, he has done it without being acrimonious and he accomplishes what he sets out to do."

DR. HILLIARD E. MILLER
(1893 - 1945)

Dr. Hilliard E. Miller died suddenly April 20 of coronary occlusion. He was one of the best known gynecologists in the South and was a member of a large number of national medical organizations, notably the National Board of Obstetrics and Gynecology, as well as the American Gynecologic Club of which he was president. Dr. Hilliard Miller succeeded Dr. Jeff Miller as Professor of Gynecology at Tulane University Medical School, a position from which he resigned shortly before his death. He was chief of the department of gynecology at Touro Infirmary, senior gynecologist at

the Charity Hospital and senior consultant for the Flint-Goodridge Hospital.

Dr. Miller was a man with a most attractive personality. He had innumerable friends not only in the profession but among the laity; all will miss his cheerful smile and invariable courtesy.

BOOK REVIEWS

Introduction to Parasitology with Special Reference to the Parasites of Man: By Asa C. Chandler, M.S., Ph.D., 7th ed. New York and London, John Wiley and Sons, Inc. 1944. pp. 716. Price, $5.00.

Among the several texts on parasitology and tropical medicine which have glutted the market and confused the student during the past few years it is heartening to have a new edition of this standard text. The fact that the author has been called on for the seventh time to present the subject is evidence of its worth.

The "Introduction" is in no sense a mere elementary presentation, since it covers rather fully the important etiological agents of human disease belonging to the animal kingdom. In addition to an introductory chapter and one on parasites as a whole there are eight chapters on the protozoa, eight on the helminths, nine on arthropods, a list of journals and monographs helpful in further study of the subject and a subject index. There is a good reference list at the end of each chapter.

The volume is intended primarily for courses in parasitology in a university but is perhaps equally suited for presentation of the subject to first-year medical students. It is clearly written in an engaging style, is authoritative and up-to-date. There are numerous textual illustrations, most of which are good and are clearly reproduced.

The reviewer cannot agree with Doctor Chandler in grouping the spirochetes under the protozoa, although he sympathizes with the author in the conviction that there should be a presentation of spirochetes in an introduction to parasitology. Moreover, it should be pointed out that the heading "Helminthology" is inconsistent when it is used coordinately with "Protozoa" and "Arthropods." However, these criticisms are indeed trivial when one considers the outstanding merit of the book.

The volume is clearly printed on good paper and is unusually free of typographical errors.

ERNEST CARROLL FAUST, Ph.D.

The Biological Basis of Individuality: By Leo Loeb, M. D., Springfield, Ill., Charles C. Thomas, 1945. Pp. 711. Price, $10.50.

Dr. Loeb is Professor Emeritus of Pathology at Washington University School of Medicine. For almost fifty years he and his colleagues have been concerned with the subject of this monograph—the study of the organ and tissue differentials which determine the structure, metabolism, motor and psychical activities of individuals. He began to assemble the data in 1930 and has taken fifteen years to complete the task. The resulting volume is, as one would expect, a carefully written, completely documented account of all phases of the problem.

The book is divided into eight parts and includes discussions of the results of tissue transplantation, differences between normal tissues and tumors, tumor growth, heredity and transplantation of tumors, the bearing of immune processes on the interpretation of organismal differentials and the relation between species and organismal differentials. In the last part, the author attempts to explain the basis of psychical—social individuality—the factors which make each individual unique and with a specific personality.

Those readers who have followed Dr. Loeb's work will be grateful to him for bringing together and interpreting the vast amount of interesting material in this field. Those interested in genetics, cancer and immunology, psychology and philosophy, in fact, all serious students of biology will find the book a source of much useful information and stimulation.

H. S. MAYERSON, Ph. D.

PUBLICATIONS RECEIVED

W. B. Saunders Company, Philadelphia and London: Medical Gynecology, by James C. Janney, M. D., F. A. C. S. A Manual of Tropical Medicine, Prepared under the Auspices of the Division of Medical Sciences of the National Research Council. Peripheral Nerve Injuries, Principles of Diagnosis, by Webb Haymaker, Capt., M. C., A. U. S., and Barnes Woodhall, Maj., M. C., A. U. S.

The C. V. Mosby Company, St. Louis: Clinical Case-Taking, by George R. Herrmann, M. D., Ph. D.

Grune & Stratton, New York: Trauma in Internal Diseases, by Rudolph A. Stern, M. D. Constitution and Disease, by Julius Bauer, M. D.

The Year Book Publishers, Inc., Chicago: The Examination of Reflexes, by Robert Wartenberg, M. D.

Random House, New York: Yellow Magic, The Story of Penicillin, by J. D. Ratcliffe.

D. Appleton-Century Company, New York and London: Penicillin Therapy, by John A. Kolmer, M. S., M. D., Dr. P. H., Sc. D., LL. D., L. H. D., F. A. C. P.